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ABSTRACT

The document discusses the nature of moral judgment, reviews previous studies which link higher education to moral judgment, and presents results of a longitudinal study comparing college and non-college subjects. This project report from the Higher Education and Cognitive-Social Development Project at the University of Minnesota is presented in three sections. In Section I the motivational and cognitive theories of moral education are discussed. In the motivational theory, the goal of moral education is to change the individual's motives from selfish, impulsive, and unsocial to altruistic, disciplined, and social. The cognitive theory portrays the goal of education as developing the individual's understanding about how people interact with each other. Lawrence Kohlberg's six stages of moral development and a review of research on cognitive development are presented. Section II summarizes research on the impact of higher education on moral judgment as measured by the Defining Issues Test (DIT), which constitutes the largest data base on a single measure of moral judgment. Results indicate that changes in moral development occur over long periods of time and apparently not through the teaching of specific doctrines. Section III reports results of a longitudinal study by the author to determine if college students show greater gains in moral judgment development than non-college students. The 59 subjects were tested during high school, two years after, then four years after the initial test. Thirty-eight subjects had gone to college, 18 had not (for three subjects the classification was ambiguous). Participants in the third testing completed the DIT, the Comprehension of Moral Concepts Test, Law and Order Political Attitudes, and a "life history." Results indicate that higher education fosters development in moral judgment, particularly at the four year mark. (Author/KC)

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The Impact of Higher Education on Moral Judgment Development

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U S DEPARTMENT OF HEALTH, EDUCATION & WELFARE
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Project Report #1
Higher Education and Cognitive - Social Development Project
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The Impact of Higher Education on Moral Judgment Development

Abstract

There are three sections to this report: Section 1 is a broad theoretical discussion of the nature of moral judgment and its relevance to higher education. A brief overview of moral judgment research is presented, including a discussion of the role of moral judgment in behavior. Section 2 is a review of previous studies relating higher education to moral judgment. Section 3 presents some current research based on an ongoing longitudinal study comparing college students with non-college subjects.

The Impact Of Higher Education On Moral Judgment Development

There are three sections to this report: Section 1 is a broad theoretical discussion of the nature of moral judgment and its relevance to higher education. Section 2 is a review of previous studies relating higher education to moral judgment; Section 3 presents some current research based on an on-going longitudinal study comparing college students with non-college subjects.

More specifically, Section I describes the two major theories of moral education and how each relates to the theory of democracy. The theoretical nature of the moral judgment construct is discussed and distinguished from other constructs. A brief overview of moral judgment research is presented, including a discussion of the role of moral judgment in actual behavior. Finally, the implications of this research for moral education programs is discussed, along with other background considerations for designing educational programs.

Section I: THE NATURE AND IMPORTANCE OF MORAL JUDGMENT DEVELOPMENT

Theories Of Moral Education And The Democratic Ideal

Historically, there are only two major theories of moral education. The two theories differ in terms of their goals, assumptions about human nature and educational strategies. One theory, which can be called the motivational theory, conceptualizes the goal of moral education in terms of changing the motives of the person from selfish, impulsive and unsocial motives to altruistic, disciplined and social ones. This theory portrays the process of moral education in terms of "socializing" the individual -- that is, encouraging the individual through example and reinforcement to suppress his whims and unsocial urges and to orient himself towards behavior and attitudes which are socially acceptable and constructive for the group as a whole. The educational strategy of this approach is to make clear what is socially acceptable and unacceptable, to inculcate respect for social norms and authorities, to punish infractions, to honor exemplary service, and to discipline the individual to work in and for the group. This theory has a long and venerable tradition of adherents, including Hobbes, Durkheim, Freud, most behaviorist psychologists and social learning psychologists, and all of us who at one time or another have tried to influence a young child not to hit, bite and claw other playmates. This approach highlights the virtues of altruism, loyalty, self control, and hard work in the service of others.

The classic statement of the motivational theory is given by the sociologist, Emile Durkheim in his book, Moral Education. Durkheim emphasizes two elements in morality: the spirit of discipline and attachment to the social group.

> What is discipline, in fact, if not society conceived of as that which commands us, which dictates to us, which hands down its laws to us? As for the second element, the attachment to the group, it is again society that we discover, but conceived this time as a thing desirable and good, such as a goal which attracts us, an ideal to be realized. On the one hand, it seems to us an authority that constrains us, fixes limits for us, blocks us when we would trespass, and to which we defer with a feeling of religious respect. On the other hand, society is the benevolent and protecting power, the nourishing mother from which we gain the whole of our moral and intellectural substance and toward whom our wills turn in a spirit of love and gratitude. (1961, p. 92)

Morality then is respect for social rule and is altruistic attachment to the group.

Portions of Section I are adapted from an address to the Menninger Foundation, Topeka, Kansas, October 13-14, 1979.

The major criticism of the motivational theory of moral education is that it can become coercive, cruel in the administration of punishments, stifling to individual development, and a tool of those in power to keep themselves in power. In George Orwell's novel, 1984, the leaders are evil; in Dostoyevsky's novel, The Brothers Karamazov, the Grand Inquisitor has good intentions -- however, in both characterizations, the masses of people are assumed to be in need of basic alterations in their motivations in order to make them socially fit -- indeed, to make ordered society possible at all. In both cases the ruling elite decide what they want the populace to do, and then try to motivate the populace to do it.

The other approach to moral education can be called the cognitive theory. The cognitive theory portrays the goal of education in terms of developing a person's understanding about how people interact with each other. It assumes that as a person realizes what the possibilities and conditions of social cooperation are, the person will also feel a stake and gain a commitment to actualizing cooperative social arrangements. It assumes that as a person develops a larger picture of how he or she can relate to other people, that person's decision-making will be made from this larger perspective rather than the more limited, egocentric, short-sighted one. In other words, it is assumed that with education, the person is liberated from ignorance and prejudice, and that understanding leads to social responsibility. The educational goal of the cognitive theory is to foster understanding of the possibilities and conditions of human cooperation -- that is, to provide cognitive tools for analyzing social problems, and to provide methods and principles for creating integrative cooperative structures. The cognitive theory has also had a long and venerable tradition of adherents, including Locke, Thomas Jefferson, Dewey, Piaget, some ego psychologists and humanistic psychologists, cognitive developmental psychologists, and all of us who at one time or another have tried to persuade an adolescent to do something by pointing out how his own best interest aligns with the socially constructive thing. The cognitive theory of moral education is part of the official educational ideology of democracies, including the United States.

Theories of moral education are strongly linked to theories of society and political organization. This is necessarily so, because education concerns all the processes whereby citizens are prepared to participate in society, and moral education especially is concerned with the kinds of decision-making that the citizens are supposed to have. The connection between educational theory and the democratic idea is well stated by the philosopher, Ralph Barton Perry:

> Education is not merely a boon conferred by democracy, but a condition of its survival and of its becoming that which it undertakes to be. Democracy is that form of social organization which most depends on personal character and moral autonomy. . . . Democracy demands of every man what in other forms of social organization is demanded only of a segment of society . . . . Democratic education is therefore a peculiarly ambitious education. It does not educate men for prescribed places in life, shaping them to fit the requirements of a preexisting and rigid division of labor. Its idea is that the social

> system itself, which determines what places there are to fill, shall be created by the men to fill them. It is true that in order to live and to live effectively men must be adapted to their social environment, but only in order that they may in the long run adapt that environment to themselves. Men are not building materials to be fitted to a preestablished order, but are themselves the architects of order. They are not forced into Procrustean beds, but themselves design the beds in which they lie. Such figures of speech symbolize the underlying moral goal of democracy as a society in which the social whole justifies itself to its personal members. (1954, p. 425, quoted in Scheffler, 1976, p. 22)

Israel Scheffler adds:

> To choose the democratic ideal for society is wholly to reject the conception of education as an instrument or rule; it is to surrender the idea of shaping or molding the mind of the pupil. The function of education in a democracy is rather to liberate the mind, strengthen its critical powers, inform it with knowledge and the capacity for independent inquiry, engage its human sympathies, and illuminate its moral and practical choices. This function is, further, not to be limited to any given subclass of members, but to be extended, insofar as possible, to all citizens, since all are called upon to take part in processes of debate, criticism, choice, and cooperative effort upon which the common social structure depends. (1976, p. 23)

Now in calling one theory, the "motivational theory" and the other, the "cognitive theory," I do not mean to suggest that either theory is exclusively motivational or cognitive, for there are both elements in both theories: The motivational theory presupposes some cognitive learning of the rules of society and how the rules are to be applied to specific cases. Neither theory supposes that human society can function mindlessly, like a bee hive or an ant colony. The motivational theory, however, does not stress cognition in the sense of understanding the rationale and vision behind the rules, and the grounds for creating new rules.

On the other hand, the cognitive theory does not deny the existence of motivational factors, but tends to portray attitudes and motives as largely influenced by the person's perceptions, and understanding of social reality. According to cognitive theory, the allegience to a social order and willingness to cooperate comes from an appreciation of how fairly the burdens and benefits of corporate living are distributed, which thus creates the simultaneous support of all participants. Therefore the difference in the theories has to do with what processes are given primacy.

The major criticism of the cognitive approach to moral education is the same criticism that is made about democracy: it is unworkable, hopelessly idealistic and naive. Both the democractic ideal and the cognitive theory assume a great deal of rationality in human nature. In reality it

may be that whenever strong personal interests are involved, human rationality gets shortsighted -- or at least, rationality is used in the service of securing one's own interests rather than creating a plan that balances everyone's interests. Perhaps both democracy and the cognitive theory assume too much intellectualism in people when supposing that people generally want to understand "the big picture" and want to see things from a larger perspective. Furthermore, what is there to suggest that people really want to "take part in processes of debate, criticism and choice" except insofar as their own immediate interests are concerned? What evidence is there that the promotion of critical powers and the development of knowledge ever leads to a coordinated plan of cooperation, rather than just endless debate? And even if a coordinated plan is worked out, what is there to motivate people to follow it except the threat of sanctions?

Both the democratic ideal and the cognitive theory of moral education are part of many statements of official American educational ideology. Long ago, the creation of tax supported public education for all children was justified in terms of preparing the citizenry for participation in the democratic process -- people who are given the vote must be informed and intelligent decision-makers. Moreover, the official rhetoric about the curriculum in American schools has often been justified in terms of developing individual potential, of liberating people from ignorance and petty provincialism, and of providing the knowledge for deciding their own destinies. The benefits of college education are often discussed in terms of building personal integrity and broadening social vision, in developing individuals who can question society as well as contribute to society.

And yet, both the democratic ideal and cognitive theory of moral education make bold assumptions about human nature and about the workings of society. As Sheffler states, "A society committed to the democratic ideal is one that makes peculiarly difficult and challenging demands of its members; it accordingly also makes stringent demands of those processes through which its members are educated" (1976, p. 21). There is much to make us skeptical about the democratic ideal and the cognitive theory of moral education. Political analysts often stress the role of irrational elements in elections: People seem to vote their special interests and "gut feelings"; the politicians seem to work harder on their "images" than in presenting clear proposals for social problems. Much of contemporary social science accounts for human behavior in terms of conditioning and conforming to prevailing models rather than behavior based on individual critical appraisal and deliberate plan. In the last 50 years, an enormous amount of research has been devoted to showing how human behavior is influenced by the particular pressures acting in the person's immediate situation rather than showing anything like personal integrity. Furthermore, many signs of breakdown are in our society: For instance, (1) public opinion polls indicate failing public confidence in government leaders and in our basic institutions; (2) beginning with the riots in Watts many large cities seem to be on the verge of massive civil insurrections whenever the summers get too hot or the electricity goes off; (3) in the face of failures in our complex technological system (pollution, gasoline shortages, Three-Mile Island, recession and inflation) people seem largely confused and unable to be mobilized for any coordinated effort towards solutions; (4) here in America one pressure group after another pushes for higher wages and profits, seemingly assuming that it is their natural

right to get richer every year, while at the same time in other parts of the world there are millions of deaths from starvation each year and even more cases of severe malnutrition (c.f. Ehrlich and Ehrlich, 1974; George, 1977; Meadows, et al., 1972).

How are we to interpret these failures in American society and these failures of moral education? To use a medical analogy, is our problem essentially one of diagnosing the ills of an organism (for instance, like the problem of identifying and treating a serious disease), or is our problem that we don't really know how the organism works at all and perhaps we have some fundamental misconceptions about its basic nature (analogous to the 16th century physician who had grossly inadequate medical theories to work with)? Are we looking for remedies for the ills of a democratic society and its educational processes, or are we looking at a fundamental disconfirmation that a democracy can work at all in this day and age?

This is a complicated and multifaceted question. But one crucial part of it is to ask whether the democratic theorists and the educational tradition of cognitive moral education have really assumed too much rationality in human nature. There are so many ways in which cognitive moral education can go wrong:

- The encouragement of critical analysis of social norms and authorities can lead to general cynicism instead of better understanding.
- The attempt to liberate students from provincial prejudices and blind tradition can lead to the depreciation of what has been accomplished in the past and can cut people adrift from their historical moorings.
- The attempt to present situations in all their complexity can lead to confusion and information-overload instead of a higher synthesis and more adequate conceptualization.
- The encouragement of individual choice and personal understanding can lead to the perception that nobody really cares.
- The tolerance for diversity and pluralism can lead to the impression that any set of values is just as good as any other instead of a respect for the dignity of the people who hold divergent views.

Cognitive moral education and the democratic ideal expect so much of people. Perhaps Thomas Jefferson and his compatriots made some wrong guesses about human nature.

Cognitive Developmental Theory Of Moral Judgment

Fortunately, since the time of Thomas Jefferson, a considerable amount of psychological research has been devoted to investigating the role of cognitive processes in moral development. The area of research dealing especially with this issue is cognitive developmental research on moral judgment. This research in its present form was started around 1930

by the Swiss psychologist, Jean Piaget, and was advanced in this country principally by the Harvard psychologist, Lawrence Kohlberg, since the 1950s. The primary aim of cognitive development research is to determine what people understand about the possibilities and conditions of human co-operation. The way that this investigation originally began was to present a number of hypothetical moral dilemmas and to ask subjects how they thought the problems ought to be solved. The psychologist then attends in particular to the way in which the subject defines the dilemma and to the subject's underlying concepts of fairness. In other words, it's not so important what action the subject advocates to solve the dilemma as is his reasoning and thinking processes in getting to a solution. For instance, here is one of the dilemmas that Kohlberg has used:

- -

Insert Table 1 here

(Tables for each Section are at the end of each Section)

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It is interesting to look at some of the types of answers that people give to this dilemma.

- - - - - - - - - - -

Insert Table 2 here

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In these 3 types of answers, notice how differently the situation is perceived and what different decision criteria are used. In the first answer, the dilemma is conceptualized from the point of view of the actor, Heinz, and his immediate interests. The point of view of the wife and the druggist are not given much importance. For the first answer, the moral problem is decided in terms of simple prudence, what instrumentally serves the interest of the actor. In the second answer there seems to be acknowledgment of an on-going relationship between Heinz and his wife which the actor would want to maintain. Also there is some consideration about how "good" or "nice" Heinz's motives would be, were he to steal. For the second answer the moral problem is decided in terms of what role responsibilities one has in close relationships and in terms of generally wanting to be a nice person. In the third answer, the moral problem is set within the context of all society in which not only Heinz, his wife, and the druggist are concerned, but all the people in society are in some way involved. For the third answer, the moral problem is decided in terms of what maintains order in all society.

Through analysis of many responses to moral dilemmas, Kohlberg noticed some recurrent themes or ways that subjects orient to these dilemmas. The job of the psychologist is to characterize the basic presuppositions and concepts that are used in interpreting moral dilemmas; it is to identify the underlying conceptions of fairness which the subject intuitively applies to the moral dilemma. A subject may not be aware of his own rules of interpretation or the basis of his intuitions; it is the psychologist's job to ferret these out and portray them in explicit terms. Kohlberg has identified six basic types of responses to moral dilemmas and these basic types are given in Table 3.

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Insert Table 3 here

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Although there are hundreds of distinguishing features which are used to analyze interview material, the basic logic and the central themes are characterized in terms of these six basic types. The definition of the types have been undergoing revision for the past 10 years, and some researchers (e.g., Gibbs, 1977; Haan, 1978; Rest, 1979) interpret the stages in somewhat different ways from Kohlberg's most recent version; in fact, Table 3 represents my version of the six stages. However, for researchers in the Kohlberg tradition, these differences are relatively minor compared to the similarities, and these differences are discussed elsewhere (Rest, 1979, Chapter 2). The major theoretical claim is that the basic underlying logic of people's moral judgments can be identified, that the major types are few in number, and further, that they are the six types presented here.

Cognitive developmentalists make another theoretical claim which has immense importance. They claim that there is a developmental order to the types; that is, Stage 1 thinking is manifest early in a person's development, and then Stage 2, Stage 3, Stage 4, etc., come into use, in that order. In other words, people's moral thinking changes over time, and the way in which it changes is characterized in terms of the 6-stage developmental sequence. Developmentalists claim that the earlier stages are simpler forms of reasoning than the later forms, and that the simpler forms are prerequisites to the later stages. The later stages build upon the earlier stages and are elaborated out of the earlier stages. The later stages are more advanced and are better conceptual tools for making moral decisions because they take more considerations into account, envision more adequate forms of integrating human interaction, and employ more adequate principles for balancing the interests of people.

Description of the Six Stages

As mentioned before, moral judgment is concerned with concepts of fairness. The fourth column of Table 3 ("Central concept . . .") gives the distinctive way that fairness is conceptualized at each stage. The developmental progression through the stages is governed by how clearly, comprehensively, and imaginatively a persons sees the possibilities and conditions of social cooperation. Stage 1 starts off with extremely simple forms of cooperation -- and consequently, has a very primitive concept of fairness; and as we move to more advanced stages, new concepts emerge about how people's expectations can be coordinated (Column 2, "Coordination of expectations . . .") and about how the interests of people can be balanced (Column 3, "Schemes of balancing . . ."). The way that people's interests are balanced is what creates a stake for each of them in supporting that particular social order, and a person's sense of fairness comes from appreciating the balance in how the benefits and burdens of cooperation are distributed among the participants. (This account borrows heavily from the work of John Rawls, A Theory of Justice, 1971.)

Stage 1's concepts of fairness arise out of the parent-child relationship. The child is aware that his caretakers tell him to do certain things and not to do other things. At Stage 1, being moral is being obedient. And as long as the child does what the parent says, the parent shouldn't punish him. If the child was obedient and then punished, that would be grossly unfair to Stage 1. At Stage 1, the cooperation of the child with the caretaker is not equal or reciprocal since the child does not set rules for the caretaker. But the child has a basis for knowing how to govern his actions to accord with what the caretaker expects, and at a primitive level has conceptualized an arrangement for getting along with each other.

Stage 2 represents an advance in viewing each individual as having his own wishes, motives, and points of view. For Stage 2, an act is right if it does some good for the actor. Viewing each person as an independent agent motivated to pursue his own interests, Stage 2 has a concept of social interaction less lopsided than Stage 1's; in Stage 2, each person is an independent operator. Two people may want to cooperate and do each other a favor if it is in each one's interest to do so. Here are the beginnings of reciprocity, in which each party has rights and responsibilities, as determined in a specific bargain. Stage 2 bargains are characteristically simple "one-shot" exchanges of favor for favor -- a limited form of eqilibrated social cooperation. The accomplishment of Stage 2 is to introduce a purposiveness to the rules of cooperation, in contrast to Stage 1's blind obedience. With the notion of simple exchange, cooperation becomes something that one can voluntarily enter into, with each party understood as having something to gain -- and that's what makes it fair.

The crucial advance leading to Stage 3 is "reciprocal role taking," that is, the realization that I can be aware of what you are thinking, you can be aware of what I am thinking, and we both can be aware that we are mutually aware. Reciprocal role taking makes possible a new kind of cooperative structure among people: the reciprocity of enduring friendship and mutual caring relationships. By being able to reciprocally role take each other, two people can form a more enduring relationship than the single, one-shot exchanges as conceptualized in Stage 2. Stage 3's concept of relationship entails the establishment of a balance of interests in which each party is constantly thoughtful and considerate of the other's feelings, and each tries to be helpful and supportive. For Stage 3, morality is a matter of establishing positive enduring relationships. Stage 3 therefore provides a more stabilized social system than Stage 2, because rights and responsibilities are as enduring as the relationship is enduring, not bargained for favor for favor.

Stage 3 conceptualizes a stabilized and enduring system of social interaction based on mutual understanding, but this system is limited to primary group relations based on sentiment. It fails to define guidelines for moral interaction for people outside one's circle of friends or relatives. Stage 4 advances beyond Stage 3's limitations with a new conception of how shared expectation can be established. At Stage 4, expectations among people about what they can expect from each other are established by laws. Laws are publically set, knowable by all members of society, categorically and impartially applied, and impersonally enforced as a society-wide concern. Individuals are related to each other not on the basis of whether

they like each other or not, but are related through their respective roles or "positions" in society. Such "positions" represent the functional divisions of labor deemed useful to accomplish the institution's goals, and are defined without regard to any particular person, but with regard to the particular duties, prerogatives, and rewards appropriate to that function. Each person has a job to do as his part of the division of labor in society, and each person has a moral obligation to do his job expecting that others will do theirs. This complementarity of roles permits society to function; it is this balance that constitutes the sense of fairness at Stage 4.

Although Stage 4 provides a rationale for supporting established social arrangements, it does not provide a rationale for choosing between different systems of laws or for creating new laws. The realization that advances people beyond Stage 4 is that there are many ways of arranging a stable social order; however, some social systems distribute the benefits and burdens of social cooperation very unequally or do so on arbitrary grounds. What is distinctive about Stages 5 and 6 is that they face the problem of devising a plan for cooperation that minimizes arbitrary inequities and maximizes the stake each individual has in supporting the social system. Stages 5 and 6 provide a rationale for choosing among alternative social systems and provide principles for creating new laws and arrangements.

Stage 5 envisions the coordination of social expectations in terms of imagining what any rational person would want with regard to a social scheme. Rather than role-taking the minds of specific individuals whom one knows in concrete historical-cultural circumstances, and trying to figure out how to strike a bargain with these actual people, Stage 5 attempts to coordinate perspectives by imagining the terms of agreement that a group of hypothetical rational people would accept. One attempts to justify a plan of social cooperation by imagining what is rational -- this is essentially similar to attempting to justify scientific propositions in terms of what a hypothetical rational person would accept rather than trying to make bargains with other scientists to accept one's theories. The cooperative system that Stage 5 envisions is one based on the law-making process, in particular, having proceudres for producing consensus. If the law-making process reflects the general will of the people, each having a chance to make his wishes known, then according to Stage 5, whatever laws are duly arrived at should be viewed as representing the most desired set of social arrangements. If the procedures for making laws have not denied anyone an equal say in determining them, then the laws that eventuate are presumed to be the best balance of interests that is possible. Stage 5 stipulates however that certain minimal safeguards be guaranteed for everyone, certain basic rights like "life, liberty, and the pursuit of happiness." Basic rights are necessary to prevent the majority from making life intolerable for the minority, inasmuch as intolerable social arrangements would make it unreasonable for the minority to feel committed to the social order.

Before going on to Stage 6, it may be helpful to summarize the description of the stages so far. At every stage there is an intuitive sense of what is right and fair. This moral sense changes as more complexities of social life are taken into account. Recall that Stage 1 provides a

normative structure (the caretaker's demands) for the regulation of human interaction; however, in this system of cooperation there is great inequality between parties and hardly any reciprocity. The system comes into being because of the accidents of birth -- i.e., who was born first, who is bigger and more powerful, etc. Stage 2 makes significant progress toward establishing equality among participants through the notion of relative individual interests and simple exchange. Stage 2, however, provides only a very temporary and fragmentary system of social cooperation, and is arbitrarily bound by the particular circumstances of parties getting together and having favors that each one wants. Stage 3 provides for a more enduring system of cooperation in relationships of mutual caring and affection, each party being committed to the other's welfare; however, Stage 3 arbitrarily limits cooperation to whatever friendships have been established at a given time. Stage 4 establishes a society-wide system of cooperation in which all participants equally are under the law and in which all are reciprocating by each carrying out his or her own role. Stage 4, however, allows gross inequalities and arbitrary distribution of the benefits and burdens of cooperation, because the social order itself may be set up legally to give advantage to some at the expense of others (for example, a slave society). Stage 5 attempts to eliminate arbitrary rules by providing procedures for making rules that reflect the will of the people, giving each person an equal say in determining the arrangements of society. Stage 5, therefore, has gone a long way in neutralizing inequities and lopsided reciprocity due to accidents of birth, historical accidents, and other arbitrary circumstances while at the same time providing for enduring social structures which can win the support of the people. Stage 5, however, has not completely insured that the outcomes of duly enacted laws produce a nonarbitrary balancing of people's interests because the collective judgment of the people at one time may be unfair as viewed by the people at a later time (for instance, the acceptance of slavery in early America). Stage 6 maintains, therefore, that although a majority of people may want a law (or social policy), that still does not necessarily make it moral, for there is a more ultimate test of morality than social consenses. The defining feature of Stage 6 is its appeal to ideal principles of justice (e.g., Rawls' two principles of justice, Brandt's extended rule utiltarianism, Kant's categorical imperative, etc.) which are presented such that rational, equal, and impartial people could choose them as the governing terms of their cooperative interaction. According to this characterization of Stage 6 (which is a little different than Kohlberg's), virtually all modern moral philosophers would be scored at Stage 6 insofar as their conceptions of fairness were principles of social organization that balance completing claims of individuals, and which optimize everyone's stake in that social order while eliminating or neutralizing arbitrary factors.

This description of the stages may be too sketchy to be completely satisfactory, and the interested reader is referred to more detailed discussions elsewhere (Colby, et al., 1979; Rest, 1979, Chapter 2, pp. 17-47). Hopefully it is sufficient to give an impression of what kind of characterizations are involved in describing cognitive development in moral judgment. Also this description may be sufficient to correct three common misunderstandings about moral judgment stages.

One misunderstanding is that the stages only represent learning fancier language -- i.e., that people at a higher stage have learned legal and moral terminology or certain tricks of agrument. For instance, Mischel and Mischel (1976) state:

> People tend to be facile about justifying their own diverse actions and commitments -- no matter how reprehensible these acts may seem to others. A wide variety of self-deceptive mechanisms may be used to facilitate and excuse the most horrendous acts . . . . History is replete with atrocities that were justified by invoking the highest principles . . . . In the name of justice, of the common weltare, of universal ethics, and of God, millions of people have been killed and whole cultures destroyed. In recent history, concepts of universal right, equality, freedom, and social equity have been used to justify every variety of murder including genocide. (p. 107)

However, we must not confuse verbal sophistication with the ability to construct an argument that satisfies the logic of Stage 6. What distinguishes Stage 6 from Stage 1 is not the incantation of certain words but the conditions for balancing the interests of people in cooperative social structures. Some Nazi propagandists during World War II talked about the "justice" of their solution to "the Jewish problem" and used pious and sophisticated language -- however it's impossible to construct a moral argument for their program of genocide which satisfies the logical requirements of Stage 5 or 6.

A second misunderstanding of moral judgment stages is that they represent liberal political attitudes, particularly the values of people in Western democracies. The implication here is that the stages basically represent the peculiar preoccupations and values of a particular subculture; and therefore, to claim that one stage is better than another is ethnocentric in affirming one's own preferences over other equally valid values of other subcultures. A counterargument to this interpretation is that the stages are not defined in terms of attitudes, but are defined in terms of logical structures for dealing with human problems that are part of every culture. As an illustration, when my daughter was twelve years old, she came home from junior high school and reported that in her social studies class, they had taken an attitude test of liberalism-conservatism. Pleased with herself, she said she got only two answers "wrong" (on 18 items out of 20 she had picked the liberal side). Although my daughter at age twelve scored very high in liberal attitudes, this was not equivalent to obtaining high moral judgment scores -- infact, her moral judgment scores are about what one would expect for her age. The structure of her thinking was not that of Stage 5 or 6. Attitudes are not the same thing as logical structures. The problem of deciding what is fair (who has what obligations to whom? who can claim what rights?) is not peculiar to Western industrial societies or to white middle class males, but is a fundamental question for all people in all cultures. Issues of justice are fundamental to all rational beings who live in groups, not the peculiar preoccupation of Westerners.

Thirdly, sometimes the moral judgment stages are assumed to be descriptions of entire personality organizations. Strictly speaking moral judgment stages describe what people understand about the possibilites and conditions of cooperative living -- they describe the underlying logic of people's concepts of fairness. Some writers have confused stages of moral judgment with personality characteristics such as social shrewdness, degree of concern for loved ones, or degree of moral courage. While these characteristics are involved, they are not the defining characteristics of moral judgment stages -- that is, Stage 6 is not defined in terms of the greatest shrewdness, concern for loved ones, or moral courage. Several examples will illustrate what I mean. Consider the character from Stanley Kubrick's film, Dr. Strangelove. Dr. Strangelove was exceptionally clever and shrewd. He was a master of playing complicated games of human chess. In the film, Dr. Strangelove proposes a brilliant strategem to the President of the United States and military Chiefs of Staff to go ahead with a full scale preemptive nuclear strike against the Soviet Union, engage their "doomsday machine" which unfortunately would annihilate most of the population of the world; however, Dr. Strangelove and the Chiefs of Staff could themselves escape the holocaust in ingeneously designed underground chambers; and, Dr. Strangelove proposed that he and the Chiefs of Staff all do their "duty to humanity" by each taking along ten young, fertile women. Dr. Strangelove shows exceptional shrewdness -- however, his proposals do not rise above Stage 2 because his proposals are always self-serving and do not coordinate his interests with the others affected by his proposals for social action.

As another example, consider Mario Puzo's character in The Godfather. Don Corleone, the Godfather, is portrayed as a magnificent family man. He loves his family and friends, and is constantly concerned with their welfare and happiness. He is wonderfully generous and loyal. He is sensitive to their wishes and individual personalities, does what he can for their own development and spares no expense on their behalf. Now despite the high marks that Don Corleone would get for his loving concern for his family and friends, he does not typify Stage 6 because the Godfather is a bit excessive in his dealing with people who are not his friends or family.

As a last example, consider the character that the actor, John Wayne, portrayed in many of his movies. John Wayne presents a character who is brave, stands up for his values, and is willing to take risks and make sacrifices. For these characteristics, a person is to be admired. Not withstanding the heroism, however, it sometimes seems that Wayne is a little too eager to sacrifice himself and others. Dedication to protecting and defending a social order need not imply any stage higher than Stage 3 or 4.

I have used negative examples here purposely as a means to disentangle admirable personality traits from the defining elements of moral judgment stages. People can be high on these traits, yet that does not characterize them as Stage 5 or 6 in a cognitive developmental stage scheme. Stages of moral judgment define progressively more adequate concepts of fairness. If a researcher attempts to define stages in terms of personality characteristics such as degree of courage, degrees of concern for loved ones, etc., then something quite different from a cognitive developmental analysis is being proposed, and the logic of this kind of a

theory must be explained on different grounds. Anyone (e.g., Peck & Havinghurst, 1960) who purposes a theory of moral development based on personality traits has vexing conceptual problems: e.g., in what sense would someone with great courage be at a higher or lower stage than someone with great concern for loved ones? Or are there separate stage sequences for courage, for concern for loved ones, for punctuality, for honesty, and for all the other desirable traits one can think of?

What then do we have here with this 6-stage theory of moral judgment development? We have a theory purporting to describe the progressive transformations in people's thinking about the possibilities and conditions of cooperation. We have descriptions of the systems of ideas which underlie people's intuitions of fairness at different stages. We have a way of talking about the development of moral rationality. Many questions arise at this point: What evidence is there that any of this is true? Do people really undergo the changes postulated by the theory? If so, how far along do they get? What experiences cause development? What is the relation of moral conceptualization to the way people actually live their lives? How can this theory help explain what's happening in our country? What educational implications follow from this theory?

Research On Moral Judgment Development

A comprehensive review of the cognitive development of moral judgment involves thousands of references (see Rest, 1980 -- in preparation). There are three main clusters of studies, however: One focused on Piaget's assessments of moral judgment, a second using Kohlberg's interview method of moral judgment assessment, and a third using the Defining Issues Test, a multiple-choice method of assessment developed at the University of Minnesota. Each of these three major areas has produced several hundred studies -- there are many other research approaches, but the literature on each of these other areas typically consists of one to five studies, and it is difficult to draw conclusions from such small scale investigations. In the remarks that follow I will draw chiefly on research using Kohlberg's interview and on the Defining Issues Test. Research using Piaget's method of assessment focuses only on young children and the recent studies have not emphasized cognitive development, per se, but rather details of the test stimuli. I will emphasize research using the Defining Issues Test (hereafter, referred to as the "DIT") because I have been involved in that research and am most intimately familiar with it, because that research is most recent and less widely known, and because research using it constitutes the largest data base yet assembled on a single measure of moral judgment.

Methods of Assessment

The research operation that precedes all other operations is assessment or individual diagnosis -- i.e., the method for identifying what cognitive structures are operative in a person's thinking. Developing an assessment instrument involves (1) devising a standardized means of collecting information (e.g., an interview, questionnaire, observation, etc.);

(2) the identification of a set of critical features in terms of which a developmental analysis is made (e.g., the stage characteristics described in the previous section); (3) experiments on methods of indexing (i.e., how to combine the information collected from various parts into a single score); and (4) a program of validation (i.e., carrying out a series of cross-validating studies which interlock to make a case for construct validity).

Kohlberg in the 1950s approached the assessment problem by asking people to discuss how they would solve a number of hypothetical moral dilemmas. What people say in an interview is later matched by a trained scorer according to scoring guides. A person's moral judgment score reflects the use of stage-defined categories in the scoring guides. The method is very complicated and has been undergoing revision since 1968. Recently the work has reached the final stages of completion in an 800 page manual. Data on the scoring system's interjudge reliability, retest stability, internal consistency and sequential validity on 20-year longitudinal data (see below) are very good (Colby, 1979). If subsequent research replicates these features, the measure will be a very important developmental measure.

At the University of Minnesota another method of assessing moral judgment has been devised, the DIT. It is derived from Kohlberg's basic theory but uses a multiple choice format and therefore can be objectively and easily scored (Rest, 1976; 1979; see Revised Manual, 1979). The DIT assumes that people at different developmental stages perceive moral dilemmas differently. Therefore if people are presented with different statements about the crucial issue of a moral dilemma, presumably people at different developmental stages will choose different statements as representing the most important issue. Table 4 shows a set of issue statements that were written for the Heinz dilemma.

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Insert Table 4 here

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The subject's job is to read each statement and to indicate how important each is in making a decision about what Heinz ought to do in this situation -- the subject is to choose which questions are the most crucial ones in making a decision. The issue statements were written to exemplify the distinctive concerns of Stages 2, 3, 4, 5 and 6, and therefore the way that a subject rates and ranks these statements can be used to derive a developmental score for the subject. Several internal reliability scales are built into the questionnaire as a test of a subject's random checking or checking items on the basis of verbal complexity rather than of meaning. Studies indicate that subjects cannot fake high scores on the test without invalidating their questionnaires (see Rest, 1979, Chapter 7). The most frequently used index is the "P" index, which represents the relative importance that subjects give to "principled" moral considerations (Stages 5 and 6) in making a decision, however Davison reports a new index (the "D" index) based on unfolding scaling techniques which has much promise (Davison, Robbins, and Swanson, 1977; Davison and Robbins, 1977). Extensive research has been done on the reliability and validity of the DIT, and the results have been very favorable (see Rest, 1979).

Evidence for Developmental Sequence

Does people's thinking really change in the way depicted by the 6-stage theory? Four kinds of evidence are relevant to this issue.

First, if we look at people at different stages, and if it is true that people's thinking shifts from the low stages to the high stages, then younger people in general ought to have low moral judgment scores and older people ought to have high scores -- this ought to hold, at least, over the age range in which we expect development to occur.

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Insert Table 5 here

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Table 5 shows DIT scores for 4 groups of students: junior high school, senior high school, and college and graduate school students. The subjects represented in this table came from about 50 researchers around the country who sent their data to me. Looking at the P index, we see that the score increases as we move from younger groups to older groups. Therefore, there are age trends in moral judgment -- people do change in the issues that they consider important in deciding what to do in moral problems. Quite a few similar studies have been done using the DIT and using various versions of Kolhberg's test, and they all find significant age trends among student groups -- in some studies around 50% of the variance in test scores is accounted for by age-education groupings.

What about non-student adult groups? Non-student adult groups are interesting in that they allow us to disentangle age from education (i.e., older adults do not invariably have more education than young adults). It turns out that moral judgment development is much more highly related to education than to chronological age. This makes sense if we think about it in this way: years in school are a "formative period" which influences the basic ways that one thinks about social problems; the passage of years by itself does not necessarily lead to fundamental reformulations in most people's thought patterns.

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Insert Figure 1 here

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For most adults there seems to be a cessation of moral judgment development once they leave school. Our data suggest that development continues for as long as adults are in school, and then upon leaving, reaches a plateau. Figure 1 portrays this pattern. The data on which this figure is based come from comparing people at various ages who completed the same level of education -- e.g., current 16 year olds in high school, 30 year old adults who only completed high school, 60 year old adults who only completed high school (see Section 2 for further data). All such groups at the same educational level have similar average DIT scores. Although adults are sure to encounter many moral problems as the years pass, it seems that they do not reformulate the basic conceptual tools used in dealing with them. Perhaps some adults do become more sensitive to detecting whether there is a moral problem or not; perhaps some adults come

to appreciate more the difficulties in arriving at any satisfactory solution; perhaps some adults become more reflective about what moral reasoning is all about. Nevertheless our data suggest that most adults do not change the basic structures by which they make decisions after they leave school. For most adults, it seems they have become "too settled in their ways" to do fundamental rethinking. However it should be noted that special moral education programs for adults indicates that it is possible for adults to change, hence there is nothing intrinsic about adulthood that prevents moral judgment development; rather it seems that generally there just isn't the impetus to change.

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Insert Table 6 here

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It is interesting to look at the moral judgment scores of various groups. The highest scores obtained thus far have come from a group of moral philosophy and political science doctoral students. This is not too surprising considering that the DIT purports to measure conceptual adequacy in thinking about cooperative arrangements. Perhaps a group of world-reknown philosophers would have scored higher, but we don't have access to this group. Notice that the average adult score (from over a thousand subjects from many samples) is 40. Doctors and lawyers are about 10 points above the adult average, but still far away from the moral philosophers. The institutionalized delinquent boys and the prison inmates have quite low scores.

Let me hasten to make two qualifications about these data. Remember that a moral judgment score tells us something about the conceptual adequacy of a person's moral reasoning: it should not be used as an indication of who is a "better" person, or who behaves more responsibly, or who you should want as a next door neighbor. Secondly, the data in Table 6 are averages from some available samples -- individuals vary within groups, and these groups are not necessarily representative samples.

One general inference from these data is that most adults do not reach the point where they give primary importance to principled moral considerations (Stages 5 and 6) in making moral decisions. They have a long way to go before reaching the top of this scale. It seems that there is as much difference between the average adult and the junior high school adolescent (about 20 points) as there is between the adult and moral philosophy student.

Kohlberg has written that his studies show that very few adults produce moral reasoning at the principled stages (Kohlberg, 1973). This is particularly alarming when we consider that the Declaration of Independence, the Constitution and the moral rationale for democratic institutions presupposes at least Stage 5. The DIT data is a little more comforting: our data suggest that a sizable proportion of American adults at least recognize and appreciate principled thinking when they see it, even if they cannot spontaneously produce it themselves, as Kohlberg states. In other words there are very few Thomas Jeffersons in our country today who could draft the arguments for a democracy, however there is a sizable number of people who could recognize and appreciate them. And yet, even

having "a sizable number" is far away from having the entire citizenry being able to understand such basic notions as "constitutional right," "due process," "social contract," etc. A less sanguine way of putting this same point is that most people in our country do not understand or appreciate the moral rationale of our democratic institutions, nor do they see their stake in supporting these institutions.

Another kind of evidence for the developmental nature of moral judgment comes from following the same subjects over time and retesting them at periodic intervals. At least six longitudinal studies of this kind have been reported using Kohlberg's test and about as many using the Defining Issues Test (see Rest, 1979, Chapter 5). Overall, the predominant trend is that subjects do change upward over time (where "upward" is in the direction defined by the theory as more advanced). This is not to say that all subjects move upward between testings: adults tend to stay pretty much the same over two and four year intervals; a small portion of subjects actually moved down (6-7% over 4 years); and developmental change is much clearer over longer intervals of time than over shorter intervals. Nevertheless among subjects in their formative period in school, about two-thirds of them show upward movement and only 6-7% show downward movement: so the ratio is 10 to 1 in favor of upward change.

Research is currently in progress to describe the different developmental tracks of high school students who go to college versus high school students who do not go to college (a more detailed progress report is given in Section 3). So far, our longitudinal studies do not span nearly as many years as that represented in the cross-sectional studies.

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Insert Table 7 here

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As Table 7 shows, as these high school subjects embark on different paths, some going to college and some not, the college group increases at a much faster pace than the non-college group, and the difference between them widens. This evidence from longitudinal studies along with the correlational evidence from the cross-sectional studies indicates that moral judgment development is strongly related to formal education. Schooling seems to be doing part of its job in fostering more adequate moral reasoning. Whether it could and should do more is another question.

I will only mention briefly two other lines of evidence which support the notion of a developmental sequence in moral judgment: Moral judgment development correlates with other developmental measures -- people who are developmentally advanced in formal operations, in role taking, in critical thinking, in ego development, etc., also tend to be advanced in moral judgment (see Rest, 1979, Chapter 6). Secondly, Davison has examined the internal structure of DIT responses by scaling analysis and finds that the scale scores of the stages are ordered in the way postulated by theory -- i.e., the lower stages have lower scale scores and the scale scores increase in their theoretical order (Davison, Robbins, & Swanson, 1977; Davison & Robbins, 1977).

Evidence of the Cognitive Nature of Moral Judgment

Even if we accept the claim that moral judgment does change in certain ways with age, what evidence is there that upward movement represents greater social-moral understanding, better problem solving, or more equilibrated cognitive structures? How do we know that moral judgment reflects predominantly cognitive processes rather than affective processes? Isn't morality more a matter of the heart than of the head?

Various sorts of evidence indicate that the progressive changes over time in moral judgment reflect development in the capacity to think more adequately about moral problems. One series of studies related moral judgment scores to a test of moral comprehension. Moral comprehension was measured in two ways: by a subject's ability to accurately paraphrase a moral argument, and also by a subject's ability to pick out the correct recapitulation of a moral argument (see Rest, 1979, Chapter 6). These studies found that subjects who can comprehend higher stage concepts tend to use them in making moral judgments; the subjects who are low on moral judgment are those with low scores in moral comprehension. In other words, subjects who have the higher stage concepts tend to use them in making decisions.

Longitudinal studies have shown that as subjects go up in moral comprehension, they tend to go up in moral judgment. Cognitive capacity seems to place a ceiling on the subject's moral judgments. Furthermore, examining the correlations of moral judgment with "affective" or personality measures, we do not find nearly as strong correlations: the correlations of the DIT with about 150 personality measures are generally nonsignificant or inconsistent, whereas the correlations of the DIT with cognitive measures is generally significant (Rest, 1979, Chapter 6).

Another line of evidence that moral judgment is governed by cognitive processes comes from experimental studies on "faking" high scores on the DIT. Several studies have been done, but the general idea is to see if subjects can improve their scores when induced to fake high, and whether they can decrease their scores when asked to fake low. Consistent with cognitive-developmental expectations, subjects seem to be unable to raise their scores, but they can very drastically lower them. When asked to "fake high," subjects do not have any better idea of what "higher" would be except for what they indicated under usual testing conditions. When asked to "fake low," subjects can easily pick out the less adequate forms of reasoning at lower stages since the subject had previously used those ideas and has now given them up as too primitive.

Some recent research by Lawrence (1978) has investigated the thought process that people go through in taking the DIT, and her work indicates that subjects usually reject a statement either because it is too high for them and don't understand it, or reject it because it is too low and simpleminded.

Research on Moral Education Programs

The intervention study of Blatt (Kohlberg & Blatt, 1973) was the first educational study based on Kohlberg's ideas on moral education, and that study continues to be one of the most impressive ones. A large number of educational programs have followed Blatt's lead, although not always replicating Blatt's findings. Lockwood (1978) and Lawrence (1980) have reviewed over two dozen value education projects which have had as a major goal the facilitation of moral judgment development. As is common in educational research, the researchers did not always have much control over the schools or students and there are many shortcomings in the designs and execution of many of these studies as pieces of scientific research. Nevertheless in many of the studies, the changes from pre- to posttest were significantly greater in the experimental groups than would be expected in regular, natural development. I get the following impressions from the studies: (1) interventions shorter than several months are unlikely to produce significant change; (2) the interventions that have explicit and heavy emphasis on moral reasoning are the ones more likely to produce change in moral judgment measures; (3) change in moral judgment through educational intervention is possible; however even when there is change it tends to be slight -- no study produced students whose scores looked like those of a group of moral philosophy students; (4) it is as yet unclear what pedagogical practices are generally most effective or which practices work best with which students.

Currently there is much effort in devising richer curriculum materials, in integrating moral discussion into other already existing classes (Social Studies, Humanities, English, etc.), and in experimenting with new school organizations. In the last several years over 50 books have been published on moral education (see bibliographies in Moral Education Forum, Kuhmerker, editor). Mention should also be made of a survey currently in progress by Callahan and associates at the Hastings Center to describe ethics programs throughout the country in colleges and professional schools.

Research on the Role of Rationality in Moral Behavior

Up to this point my discussion has described how the development of moral rationality can be characterized (in terms of the six stages of concepts of fairness in which people successively understand more adequately what are the possibilities and conditions of cooperation); and my discussion has briefly summarized psychological evidence which supports cognitive-developmental theory (evidence regarding age trends, associations with cognitive processes, etc.). At this point you may be thinking that development in concepts of fairness is very nice and good, but what do concepts of fairness have to do with the way people live their lives? Even though moral rationality may naturally develop (to a limited extent, anyway, even if not to the fullest extent in most people), nevertheless how are we better off with developed moral rationality? In other words, if we know how a person responds to Kohlberg's dilemma about Heinz and the drug, what then do we know about how that person actually conducts his life? To what extent are the assumptions of the cognitive theory of moral education regarding behavior borne out by psychological research?

This turns out to be a very difficult issue for psychological research to deal with due to conceptual, definitional, and methodological problems, however let me first give you my own overall appraisal of what the research to date shows and my own conclusions, and then I'll go into a bit more detail. I think research shows that moral judgment development is significantly related to behavior, but that moral judgment is not the only important psychological variable involved, and that these other variables modify, complicate, and attenuate the role of moral judgment. The assumptions of the cognitive theory of moral education portray a psychological ideal, just as the theory of democracy presents a political ideal, but contemporary American society falls considerably short of both ideals. The psychological literature does not indicate that it is impossible for humans in large societies to conduct their lives according to rational moral ideals, however it is very difficult to achieve this on a large scale and would require vastly more attention and resources of society than is now allocated to moral education.

After the conclusions, now let us consider the supporting arguments. First, let us consider the research that shows that moral judgment (as measured by the DIT or Kohlberg's test) is significantly related to how people live their lives. A recent review of DIT studies (Rest, 1979, Chapter 6) shows that DIT scores are significantly correlated with experimental measures of behavior (e.g., experimental tests of cooperation, cheating, conformity and sharing behavior) and also significantly correlated with naturalistic measures of behavior (e.g., delinquency, ratings of school behavior, voting in the 1976 presidential election, and clinical ratings of medical doctors). Several of these studies contain analyses which show that the DIT has unique predictability to behavior above and beyond that accounted by its shared variance with other variables (IQ, SES, attitudes, political party, etc.). In addition, a recent review by Blasi (1979) of over 50 studies concludes that there are significant relations between moral judgment and many kinds of behavior: "There seems to be overall support for the hypothesis that moral reasoning and moral action are related" (p. 61).

Moreover, many studies have shown moral judgment to be significantly correlated with people's attitudes about controversial public policy issues: for example, with opposition to capital punishment, advocacy of free speech and due process for people charged with crimes, attitudes on Watergate and the investigations of the Mai Lai Massacre, on environmental issues, on the political platforms of the Democrats and Republicans in the 1976 presidential election, and on extremist political slogans (see Rest, 1979, Chapter 6 for partial review; also Candee, 1976; Iozzi, 1978). Although some researchers do not consider "attitudes" as part of "real life behavior," nevertheless the public expression of one's attitudes can influence the flow of events in the real world, especially when other people or institutions are sensitive to the wishes of people. Indeed, the democratic process of voting is a procedure for collecting information on people's attitudes; and, of course, the outcomes of elections can drastically affect our lives.

Therefore a vast number of studies of various kinds show that moral judgment is significantly correlated with real life behavior. Alongside this evidence, however, studies must be considered which show that other

factors and psychological processes influence behavior, all of which complicate the influence of moral judgment upon behavior.

Again, the research literature is so huge on other factors besides moral judgment which influence moral behavior that I cannot summarize it here but can only give some illustrative examples of these kinds of factors.

1) William Damon (1977) found that other values besides moral values can influence behavior. Damon asked children to describe a fair way to distribute candy bars among themselves; then he let each child actually distribute the candy bars. He found that what children said would be fair deviated from what they actually did. The pressure of their own self interest distorted their espoused plan of distribution. Other values besides moral values entered into the actual decision-making.

Similarly John Dean in his book, Blind Ambition, recounts that his nefarious activities as Special Counsel to President Nixon were motivated by unquestioned loyalty to that administration and by his own ambitions within it. Dean says that he constantly put aside the larger questions of morality -- such questions were completely preempted by more pressing values.

2) Krebs and Kohlberg (1969) report a study of the interaction of moral judgment and "ego strength." Differences in "ego strength" are involved when two people have the same understanding of a situation and the same plan of action, but one has iron will, courage, and resolve, whereas the other person falters, is overwhelmed by distraction and pressures, and fails to carry through. Krebs and Kohlberg found that Stage 4 subjects with low ego strength cheat more than Stage 4 subjects with high ego strength -- the subjects with low ego strength were less able to carry out their beliefs than those with high ego strength.

3) One of the most startling findings coming from research on bystander reactions to emergencies is that people fail to help others. But the reason they fail to help is not because of general apathy or evil intent but because of confusion. In emergencies, people are often unable to define and appraise the situation or determine whether their personal action is called for (Huston & Korte, 1976). People are unable mentally to compute what to do.

4) Carol Gilligan's research (1977) has indicated individual differences in moral sensitivity. Some people seem to notice a moral dilemma almost immediately with minimal cues, whereas others recognize a moral issue only after the most blatant signs of human suffering. If a person is morally insensitive, then no matter how sophisticated one's concepts of fairness, those concepts will not even be brought into play, much less determine behavior.

5) A considerable amount of research indicates that behavior is not always under the control of conscious, deliberated thought such as is revealed in moral judgment tests. For instance Piaget himself (1932) distinguishes different "planes of mental life": At one level, a "conscious-reflective" and articulated plane, another level an "operative" plane consisting of non-vocalized, unreflective mental processes. A person's

behavior can be governed at either level, but if one's behavior is governed by unreflective operative processes, then there need be little connection between what a person says on a moral judgment test and what he does in some instance of behavior. Typically for children and perhaps for many adults, their behavior is largely reflexive, pushed and controlled by whatever stimuli and pressures happen to occur in the situation, little governed by some ongoing deliberated plan or consciously chosen set of decisions. Psychological research is as yet very incomplete on how behavior comes to be governed on the conscious-reflective plane, how a person's considered beliefs and plans and ideology come to be the chief determining force in one's life.

These five examples of factors that influence moral behavior do not exhaust the list, however they give an impression of the kinds of things that complicate the relation of moral judgment with behavior. Psychological research is just beginning to investigate how these factors interact with moral judgment.

At this point, however, we have some idea about why there are failures in moral behavior and what can go wrong in moral development (analyzed in terms of psychological processes). I will end this discussion of psychological research by listing some of the major psychological causes of failure in moral behavior:

1. At the top of the list of causes of failure, I would put failure in understanding the possibilities and conditions of human cooperation -- or in other words, low moral judgment stage. An inability even to conceptualize what would be fair in a situation places limits on how a person can perceive the situation and limits the plan of action which the person can conceive. Today in America it seems that there are many people who do not understand or appreciate their stake in making democratic society work. To many people, programs to equalize opportunities and reverse centuries of discrimination, and programs to reverse the spread of ghettos are perceived as robbing the good and rewarding the bad. To many people making shoddy goods and taking "short cuts" in work is just "business practice" and the operation of "free enterprise." To many people steps to conserve national resources and to prevent pollution are needless government hassles and "red tape." To many people due process protections of those charged with crimes are "handcuffing the police." To some people, social life is a jungle and one must eat or be eaten.

2. Inability to conceptualize schemes of cooperation is not the only cause of failure in moral behavior, of course. Moral insensitivity may limit the operation of moral ideals for failure to even notice aspects of a social problem or see a problem as a moral dilemma.

3. Lack of information and ignorance about the distant consequence of action may cause social problems. For instance most people do not realize how the current life style of American consumerism and industrialization is producing so much pollution that man, ecosystems may already be seriously poisoned. Toward the end of the century, if the world population pollutes at the current American rate, the total pollution load on the environment would be at least ten times its present load, thus severely limiting the world's carrying capacity of human population (Meadows, et al., 1972,

p. 78ff). As another instance, most people would be shocked to hear that much of the Third World's inability to feed itself stems from the economic policies of the affluent countries which in effect force the poor countries to produce cheap cash crops for our consumption rather than optimally making use of their own resources (George, 1977). Ignorance is sometimes an excuse for harmful behavior. But since people in a democracy insist upon having a large say in their corporate decision-making, they therefore have a responsibility to keep themselves informed about complex and difficult issues. All too often the American public has chosen leaders who reassure them and do not bother them rather than choosing leaders who attempt to inform them of impending problems, what it will cost us, and what we have to do. These issues however, go far into sociological and political aspects of the failures of morality in our society, and are beyond the psychological focus of this discussion.

4. Another psychological cause of moral failure is that many situations catch us by surprise, are bewildering and overload our ability to reason them out. We are often unprepared to face high demand, high pressure situations.

5. Other values may preempt our willingness to act according to what is fair. Sometimes these other values are self-centered ones, like "self-assertion" or success; sometimes these other values are group-oriented like "national security," "what's good for our company," or promotion of the Third Reich. In any case other values may cause us to put aside what we think is fair to do.

6. Failure to carry out intended plans can be due to a lack of "ego strength." Somehow we get distracted, lose sight of our goal, and succumb to the pressure or allurement of the moment.

7. If our behavior is not governed by conscious-rational processes, then our moral ideals (at whatever level they are) cannot influence our behavior.

In summary, moral behavior is at the end of a long series of psychological processes and conditions. A breakdown anywhere along the way can prevent <u>moral</u> behavior.

Implications for Moral Education

Assuming that the major goal of moral education is to prepare the citizenry for meaningful participation in democratic institutions (and not just to "socialize" people to conform to existing arrangements and laws), and given what we know about the psychology of moral development, what are the implications for moral education? Whatever specific programs we come up with, there seem to be a number of assumptions and background implications to keep in mind.

1. Currently many people (perhaps most American adults) do not understand the moral rationale of democratic institutions — at least this is the impression gained from our findings on moral judgment research, discussed above.

2. Even with adequate understanding, behavior in accord with one's moral ideals can become derailed at many points. (For instance, moral values can be preempted by other values; there might be a lack of "ego strength" to follow through on moral decisions -- moral insensitivity might be a problem, etc.). Research on other variables indicates how these variables mediate and complicate the relation of moral judgment to behavior.

3. The institutions in America that are the most likely vehicles for moral education are the public school system along with the colleges and universities. Churches and mass media can play important roles, but the educational system impacts far more people for more time. Families are perhaps the prime influence of all, but there is currently no programmatic way of influencing parents who in turn influence the children. Special youth organizations and other volunteer groups can be formed, but again their impact will be limited. The public school system is already in place; historically it was created to prepare citizens for participation in democracy; and, it now commands the largest time and effort commitment of any single institution. Therefore any large scale moral education programs must be conceived as operating through the existing educational systems.

4. Primary and secondary schools must begin the development of understanding about the structures of social cooperation, and also furnish basic information about our social institutions and the psychology of getting along with other people. However not until college is it likely that principled moral thinking (Stages 5 and 6) will mean something to many people. Principled moral thinking is quite abstract and requires imagining different ways of organizing society. The college years seem to be most crucial in moving most people beyond conventional moral thinking (Stages 3 and 4). Furthermore, in the college years the control of behavior by ideology and deliberate reflective planning is likely to increase since so many choices and so much more unstructured time is available to the college student for the first time along with the need to make programmatic decisions. Although each developmental stage is cruicial, it is during the college years that the most substantial shifts to principled moral thinking are likely to take place and the greatest shifts to behavior governed by reflective, conscious planning. If schooling is only oriented towards preparing students for assuming preestablished occupational slots, then the educational system will have failed one of its most crucial functions in a democracy.

5. The cognitive theory of moral education portrays the ideal situation, not a description of inevitable psychological processes. Understanding the possibilities and conditions of cooperation <u>can</u> lead to social commitment but a lot of things have to go right for this to occur. These processes are unlikely to occur in young children and many adults because their behavior is not under the governance of abstract ideology or such long-sighted planning. So in the meantime, some system of social control is necessary to start them off in constructive directions, to prevent them from doing harm to themselves and to others, and to make it possible for social institutions to function. The long term goal of moral education does not obviate the necessity of shaping behavior before its rationale can be appreciated and using coersive means to stop distruptive and destructive behavior.

A two-track educational approach seems sensible. One track would be designed to develop the incipient moral philosopher in people, to focus on the development of moral judgment, anticipating the time when the person will have formulated a critical moral ideology and appreciates his stake in making society work. The other track would be designed to shape behavior -- as noncoersively as possible -- so as to equip the child with socially useful skills which he may not yet appreciate, to prevent or limit destructive behavior, and to provide experience of working in groups for shared goals. In a sense I am advocating aspects of both major approaches, the motivational and the cognitive, but with certain qualifications. The influences of social example, didactic instruction in what is expected, and reinforcement would be employed to "socialize" the child, before moral rationality is developed or has much potency. Socializing comes before rationality is ready to take over. The "socialization" of the child must not be undertaken with such a heavy hand however that it stiffles his critical powers and interest in seeking for the rationale behind rules. Furthermore, the child should not be shielded from controversy or exposure to other points of view. In fact, I would advocate beginning programs quite early to develop moral judgment (e.g., as described by Kohlberg, 1973; Lickona, in press; Hersh, Paolitto & Reimer, 1979). The purpose of these activities would be to begin laying the cognitive groundwork that leads to progressively more adequate moral reasoning. No immediate payoff in behavior would necessarily be expected from the stimulation of cognitive development. Vandalism in schools and cheating on tests may not be affected by cognitive moral education at first. Cognitve moral education is a future investment in preparing people to function as envisioned in the democratic ideal.

Undeniably there is a tension between the two approaches, in particular, over the locus of control. The socialization approach vests power in the socializer and the cognitive approach delegates decision-making to the child. Just as in parenting, the teacher will have no easy time in deciding how much power to give to the child. Yet, unavoidably the child starts off with no power, but eventually the child must become the decision-maker. Transferring power from socializer to child is difficult, bu' essential in developing active participants.

6. The techniques of influence must be within the bounds of philosophical defense and constitutionality. Out-and-out indoctrination, deception, or Draconian punishments are unconstitutional, and moreover are inconsistent with the ultimate goals of moral education in a democracy. Persuasion is the foremost means of influence; coersion is to be as restrained as possible and only resorted to when justified in the individual's long term interest or as a necessity to prevent harm to others.

One of the attractions of moral education programs with an emphasis on moral reasoning is that the education of reasoning involves defensible processes of influence. It does not rely on indoctrination; its influence is based on the individual's critical acceptance of the possibilites and conditions of cooperation, in fact, such programs are oriented towards developing the critical framework for evaluating moral claims and norms. However the recent experience of Kohlberg working in an underpriviledged high school setting (e.g., see Hersh et al., 1979) indicates that moral education programs can not be focused exclusively on moral reasoning. Sweet reason isn't enough for all people all the time. But if educational

programs use other means and are targeted at other psychological variables besides moral reasoning, nevertheless the means and ends of these programs must be justified -- I have yet to see this rationale worked out.

At the college level, it is likely that moral education programs will continue to focus on moral reasoning and influence by rational persuasion. As Bok points out (1976, p. 28), "Formal education will rarely improve the character of a scoundrel." However, as Bok goes on to say, problem-oriented courses in ethics at the college and professional school level might accomplish three objectives: (a) "help students become more alert in discovering the moral issues that arise in their own lives"; (b) "teach students to reason carefully about ethical issues"; (c) "help students clarify their moral aspirations."

7. Currently we do not have a well developed pedagogy for promoting moral reasoning, moral sensitivity, moral character, moral values, etc. Although we have many promising ideas and some initial projects are underway, we are a long distance from having precise and powerful knowledge about the psychological processes, from having well-tested curricula, and from having effective teacher-training programs. Given the importance and urgency of developing an educational pedagogy in moral education, an intensive effort at program development and research is called for. Many types of basic research are needed. (I have tried to identify some of these in my book, 1979). However nothing can replace the business of actually trying out educational ideas in real educational programs. At this time I think the best expenditure of effort in educational programming is the small scale experimental program which continues for several years with progressive refinement based on information from accompaning intensive research. I think small scale projects are better than large scale projects in keeping the "idea people" close to the day-to-day functioning and decision-making rather than tying the idea people down with administration. And the small program is more flexible, better able to shift around and make use of inspiration as it comes. Along with every inspired idea for teaching I would hope there was an equally inspired idea for gathering information which could be used to check out the teaching ideas. Small programs which are intensively researched are more likely to help us than massive projects with only pre- and posttest results. Small programs which are repeated over five years with progressive refinements are more likely to be helpful than a one-shot program which is five times as big (and which often only tells us how many bugs there are in putting a program together for the first time).

8. Lastly, there is an urgency to develop effective moral education -- not just because of Watergate or because street crime is up or because the traditional family is losing its influences, but because of something even more fundamental and threatening. Many futurists predict that our society is going to be severely challenged with many crises in the next decades. Within the next 10 to 50 years it is predicted that we shall witness massive famine such as the world has never known; we will be faced with increasing scarcities in non-renewable resources (in other resources in addition to oil); polution that will destroy many ecosystems; severe economic problems arising from industrialization that is not attuned to the limits of growth; and the prospects of terrorist groups using nuclear weapons. Such crises will severely strain all of us as individuals and as societies. Some futurists are very pessimistic. Paul and Anne Ehrlich state:

> In the early 1970s, the leading edge of the age of scarcity arrived. With it came a clearer look at the future, revealing more of the nature of the dark age to come. But more importantly, it exposed the hopeless inadequacy of society's response to a diffuse and slowly evolving crisis. The time for warning is now past, and it appears that a coordinated social response to humanity's peril may never come at all. (Ehrlich & Ehrlich, 1974)

Therefore, there is some urgency for figuring out how to mobilize "a coordinated social response to humanity's peril." The Ehrlichs predict that unprecedented levels of cooperation will be a necessity to avert these catastrophies. And yet, what are we doing to mobilize ourselves and to prepare the psychological conditions for a coordinated social response? It seems to me that moral education has an important role to play in attaining "unprecedented levels of cooperation" and that there is not much lead time for developing these programs.

Table 1

Heinz and the Drug Dilemma

In Europe, a woman was near death from a special kind of cancer. There was one drug that the doctors thought might save her. It was a form of radium that a druggist in the same town had recently discovered. The drug was expensive to make, but the druggist was charging ten times what the drug cost him to make. He paid $200 for radium and charged $2,000 for a small dose of the drug. The sick woman's husband, Heinz, went to everyone he knew to borrow the money, but he could only get together about $1,000 which is half of what it cost. He told the druggist that his wife was dying, and asked him to sell it cheaper or let him pay later. But the druggist said, "No, I discovered the drug and I'm going to make money from it." So Heinz got desperate and broke into the man's store to steal the drug for his wife. Should Heinz have done that? Was it wrong or right? Why?

Table 2

Sample Response to Heinz Story

1. It really depends on how much Heinz likes his wife and how much risk there is in taking the drug. If he can get the drug in no other way, and if he really likes his wife, he'll have to do it.

2. I think a husband would care so much about his wife that he couldn't just stand around and let her die. Someone you live with like that would mean too much to him. He wouldn't be stealing for his own profit, he'd be doing it for his wife.

3. Regardless of Heinz's personal feelings, the druggist in this case seems to be protected by the law. No one is right to take the law into his own hands because if we allowed that, all society would be in danger.

Table 3

Stage of Moral Judgment

STAGE	How expectations about each other's actions are coordinated (how rules are knowable and sharable).	Schemes of social cooperation (how an equilibrium of interests is achieved).	Central concept for determining moral rights and responsibilities.
STAGE 1	The caretaker makes known certain demands on the child's behavior.	The child does not share in making rules, but understands that obedience will bring freedom from punishment.	The morality of obedience: "Do what you're told."
STAGE 2	Although each person is understood to have his own interests, an exchange of favors might be mutually decided upon.	If each party sees something to gain in an exchange, then both want to reciprocate.	The morality of instrumental egoism and simple exchange: "Let's make a deal."
STAGE 3	Through reciprocal role taking, individuals attain a mutual understanding about each other and the on-going pattern of their interactions.	Friendship relationships establish a stabilized and enduring scheme of cooperation. Each party anticipates the feelings, needs and wants of the other and acts in the other's welfare.	The morality of personal concordance: "Be considerate, nice and kind, and you'll get along with people."
STAGE 4	All members of society know what is expected of them through public, institutionalized law.	Unless a society-wide system of cooperation is established and stabilized, no individual can really make plans. Each person should follow the law and do his particular job, anticipating that other people will also fulfill their responsibilities.	The morality of law and duty to the social order: "Everyone in society is obligated and protected by the law."
STAGE 5	Formal procedures are institutionalized for making laws, which one anticipates rational people would accept.	Law-making procedures are devised so that they reflect the general will of the people, but at the same time insuring certain basic rights to all. With each person having a say in the decision process, each will see that his interests are probabilistically being maximized while at the same time having a basis for making claims on other people.	The morality of societal consensus: "What laws the people want to make is what ought to be."
STAGE 6	The logical requirements of non-arbitrary cooperation among rational, equal, and impartial people are taken as ideal criteria for social organization which one anticipates rational people would accept.	A scheme of cooperation which negates or neutralizes all arbitrary distribution of rights and responsibilities is the most equilibrated, for such a system is maximizing the simultaneous benefit to each member such that any deviation from these rules would advantage some members at the expense of others.	The morality of non-arbitrary social cooperation: "How rational and impartial people would organize cooperation is moral."

Table 4

HEINZ STORY

On the left hand side of the page check one of the spaces by each question to indicate its importance.

GREAT importance	MUCH importance	SOME importance	LITTLE importance	NO importance		
___	___	___	___	___	1.	Whether a community's laws are going to be upheld.
___	___	___	___	___	2.	Isn't it only natural for a loving husband to care so much for his wife that he'd steal?
___	___	___	___	___	3.	Is Heinz willing to risk getting shot as a burglar or going to jail for the chance that stealing the drug might help?
___	___	___	___	___	4.	Whether Heinz is a professional wrestler, or has considerable influence with professional wrestlers.
___	___	___	___	___	5.	Whether Heinz is stealing for himself or doing this solely to help someone else.
___	___	___	___	___	6.	Whether the druggist's rights to his invention have to be respected.
___	___	___	___	___	7.	Whether the essence of living is more encompassing than the termination of dying, socially and individually.
___	___	___	___	___	8.	What values are going to be the basis for governing how people act towards each other.
___	___	___	___	___	9.	Whether the druggist is going to be allowed to hide behind a worthless law which only protects the rich anyhow.
___	___	___	___	___	10.	Whether the law in this case is getting in the way of the most basic claim of any member of society.
___	___	___	___	___	11.	Whether the druggist deserves to be robbed for being so greedy and cruel.
___	___	___	___	___	12.	Would stealing in such a case bring about more total good for the whole society or not.

From the list of questions above, select the four most important:

Most important ___

Second most important ___

Third most important ___

Fourth most important ___

FIGURE 1
HYPOTHETICAL RELATION
OF P-SCORE, AGE AND EDUCATION

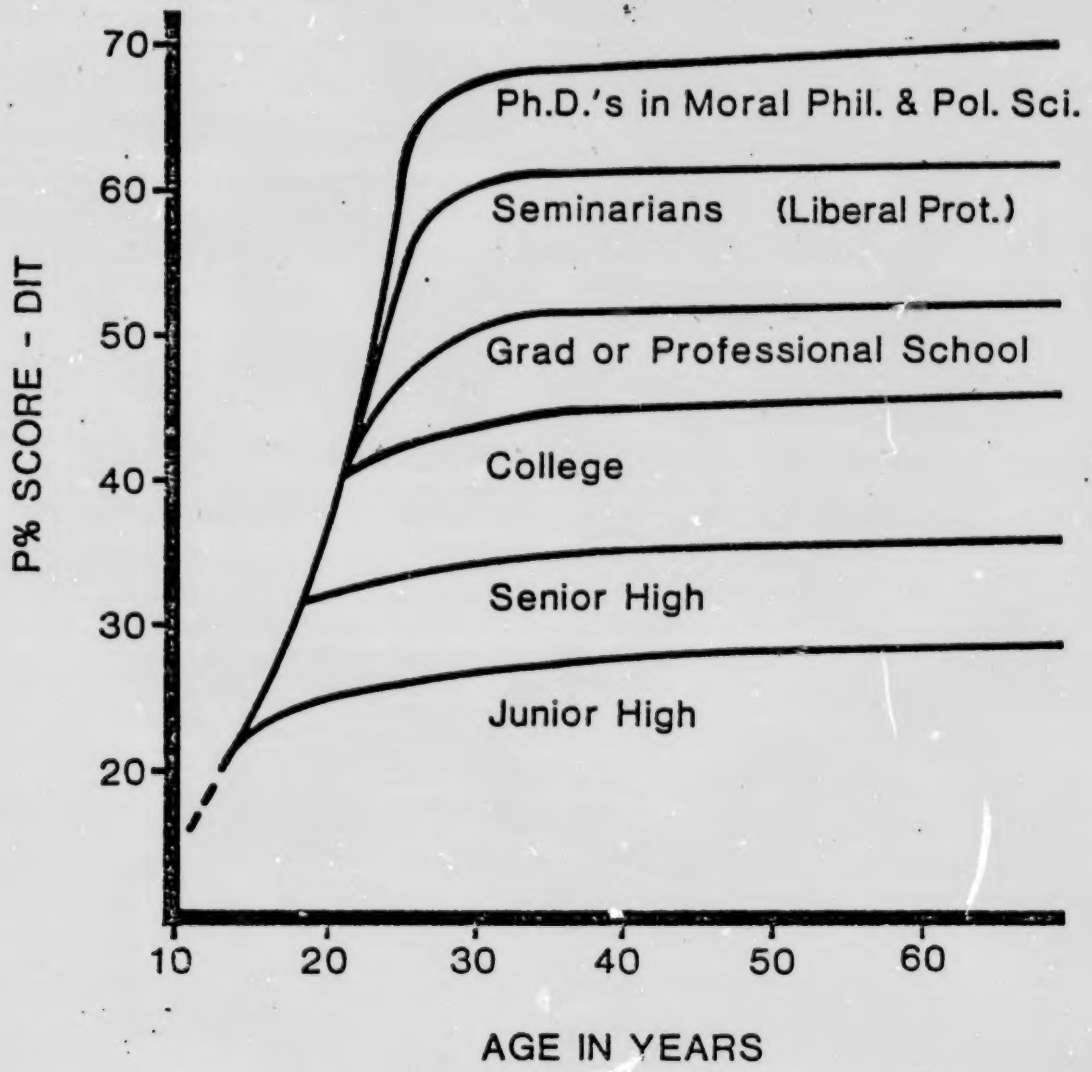

Table 5

Average Moral Judgment Scores of Student Groups

Student Group	Average DIT (P-Index)	Number of Subjects in Sample
Junior high students	21.9	1322
Senior high students	31.8	581
College students	42.8	2479
Graduate school students	53.3	183

Table 6

Selected Groups in Moral Judgment Development

Average P-Index	Group (and Study Reference)
18.9	Institutionalized delinquent boys, average age = 16.1 (McColgan, 1975)
21.9	Average junior high (from previous table)
23.5	Prison inmates (Kantner, 1975)
28.2	Adults with senior high education in Eugene, Oregon (Dortzbach, 1976)
31.8	Average senior high school students (from previous table)
40.0	Average of adults in general (from Rest, 1976)
41.6	Navy enlisted men (Crowder, 1976)
42.3	Average of college student (from previous table)
42.8	Students in graduate business school (McIntyre, 1979)
46.4	Staff nurses (Crisham, 1979)
46.8	College volunteers for community service project (Rest, 1976)
49.5	Practicing medical physicians (Sheehan, 1979)
50.2	Medical students (Hustead, 1978)
52.2	Advanced law students (Willging, 1979)
59.8	Seminarians in liberal Protestant seminary (Schomberg & Nelson, 1976)
65.2	Moral philosophy and political science doctoral students (Rest, et al., 1974)

Table 7

College Vs. Non-College on P-Index

	High School Testing	2 Years Later	4 Years Later
College bound Ss n = 39	33.5	45.3	48.7
Non-college Ss n = 18	29.3	38.8	35.2
Difference between college and non-college	4.2	6.5	13.5

II. SUMMARY OF PREVIOUS RESEARCH: THE IMPACT OF HIGHER EDUCATION ON MORAL JUDGMENT AS MEASURED BY THE DIT

Formal education, particularly college and graduate school education, have been powerful correlates of moral judgment development as measured by the DIT. A recent book (Rest, 1979) reviews much of this evidence, however the material especially relevant to higher education is scattered throughout the book. This section is intended to bring this material together along with other material and to focus on the special issues regarding moral judgment and higher education.

At the onset, some explanation should be given for limiting this review to DIT studies. Kohlberg's test of moral judgment is the best known test, however it depicts very little high level thinking in adult groups. In a recent reanalysis of 20 year longitudinal data (scored according to the most recent Standard Scoring Guide), there are no adults who are solidly at the principled morality level (Stages 5 and 6) and only 7% of the subjects show a Stage 5 (4) mix -- see Colby, 1979. As Kohlberg has previously stated (1973), the production of principled morality is extremely rare even in adults. Furthermore, on Kohlberg's test, growth is most dramatic up to adolescence, and thereafter it is exceedingly undramatic. The lack of growth after adolescence and the rarity of higher stage thinking may be due, in part, to the very stringent criteria for scoring the higher stages. To be credited with higher stage thinking on Kohlberg's test, subjects must produce highly articulate and detailed explanation, whereas the DIT is a recognition task which places much less emphasis on verbal articulation. The DIT shows much more variance in scores among adolescents and adults, and since this variance is patterned in ways congruent with theoretical expectations about the moral judgment construct, the DIT appears to be much more sensitive to higher level development

and to development beyond adolescence. Other measures of moral judgment (besides Kohlberg's and the DIT) have either been designed for use with young children (e.g., Piaget, 1932; Damon, 1977) or have been employed in so few studies that their validity characteristics are not yet established.

Comparison Of Different Sample Groups

Many investigators throughout the country have generally sent data to me on DIT scores and on the characteristics of their sample. I have performed various secondary analyses on these samples, looking into the correlations of the DIT with age, education, socioeconomic status, sex, political party, religious affiliation and geographical area. The strongest correlates of the DIT is education (see Rest, 1976; Rest, Davison & Robbins, 1978). Table 5 in the previous section reported how increases in education were associated with increases in DIT scores. In several studies of adults, the correlations of DIT scores with education are higher than for age: Coder (1975) found a negative correlation with age (r = -.10) and a positive correlation with education (r = .25); Crowder (1976) found correlations of -.05 and .25, respectively; G. Rest (1977) found a correlation of .45 with education; and Dortzbach (1975) found a negative correlation with age and a positive correlation with education. Furthermore, as stated in Section I, cross sectional data suggest that adults seem to plateau in moral judgment development after they end their formal schooling. Table 2.1 presents some groups of adults with current student groups at comparable educational levels, and the comparisons show that the adult averages are similar to the much younger student averages. The table

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Insert Table 2.1 here

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also suggests that students whose training presumably includes special emphasis on moral reasoning (the seminarian group), tend to have higher DIT scores. In

fact the highest group average yet obtained on the DIT have been moral philosophy and political science doctoral students.

In summary the comparison of various groups on DIT scores strongly supports the notion that education has a strong impact on moral judgment. A few qualifications to this should be mentioned here. This kind of data is not the strongest kind of data possible because we are dealing here with group averages, and also we have not followed individual subjects over time with repeated testings to track their development. Moreover, there is evidence that other kinds of factors influence moral judgment as well as (or despite) education: region of country (see Rest, 1976), intellectual milieu and ideological commitments (Ernsberger, 1975; Lawrence, 1978).

Tables 2.2 and 2.3 are from the 1979 Revised Manual presenting normative data on many college and professional school groups.

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Insert Tables 2.2 and 2.3

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Previous Longitudinal Studies

The first longitudinal study (Rest, 1975) had tested a group of high school students first in 1972. Some of these students later went to college and others didn't. In 1974 the students who had gone to college had gained twice as much on the P-index as students who had not gone to college. Furthermore, the different developmental tracks for college versus non-college subjects were also evident in moral comprehension and in social-moral attitudes. Subjects were also asked to cite the influences that accounted for changes in their moral reasoning. Those subjects who attributed change over two years to formal study and academic reading had gained significantly more in DIT scores than subjects who did not cite that influence. Therefore the 1975 study seemed to give strong support to the influence of higher education upon moral reasoning. (See Table 2.4, Group S.)

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Insert Table 2.4 about here

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Subsequent studies have produced different findings and have questioned the generality of the 1975 study. McGeorge (1977) retested a group of students two years later in a teachers' training school in New Zealand (not a liberal arts college) and found only slight (nonsignificant) upward change. Rest, 1979 retested two other samples and found different patterns of change. In one sample (Group J), both the college and non-college students gained about the same. In another sample (Group W), the college bound group was significantly different from the non-college bound group in high school, and over the two year interim the non-college group made up some of the difference between the groups.

Therefore, the four groups studied so far present a different pattern of change. Note should be taken, however, that these longitudinal studies only involve a two year interval -- perhaps too short a time for the impact of college to register clearly. Note that in the cross-sectional studies, education was represented in a much greater range, spanning grade school to graduate school. Furthermore, all these studies assessed college students in their second or third year, a time which is often characterized by instability and questioning rather than consolidation. And still further, some of these samples were quite small (as few as eight subjects in a group). The studies presented in Section III are extensions of these longitudinal studies, intended to clarify these confusing results.

Studies Of Educational Interventions

Several educational programs at the college leve which were specifically designed to enhance moral judgment development are reviewed in Lawrence, 1977 and Rest, 1979. (See Table 2.5, numbers #1, 8, 10, 11, 12, 13, 14, 16.) These

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Insert Table 2.5 about here

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programs ranged in duration from two weeks to six months, and hence were considerably shorter than the time interval used in the longitudinal studies. Of the eight programs in higher education several reported a significant pre-post gain in the experimental group, but the studies did not report sufficiently on comparisons with gains in control groups; therefore, gains cannot unequivocally be attributed to the intervention, per se. Even so, gains were small (whether due to the intervention or not) and in no case did an intervention turn college students in a group scoring like moral philosophy graduates on the DIT. In examining these studies, the most striking trend is how little movement one does get on DIT scores over short periods of time, even in interventions specifically emphasizing moral reasoning. Therefore, the impact of higher education upon moral judgment development does not seem to be particularly mediated through specific moral education courses, although the data indicate some of these special programs do have significant immediate effects. Furthermore, whatever gains in moral judgment do come from higher education experiences, they are not simply a matter of picking up a few ideas and technical verbalisms from moral philosophy. If moral judgment was simply a matter of being taught some specific phrases or verbal conventions, then gains on short term interventions should be much more dramatic than they are. What seems to be involved in moral judgment development is a change in basic and fundamental ways of thinking about the social world which education affects slowly, over long periods of time, and apparently not through the teaching of specific doctrines or technical language but by providing the impetus for general reformulations of basic perspectives on society.

College Experiences Associated With Change

If higher education does have an impact upon moral judgment development what is it that is effective? Is there some specific kind of experience that generally facilitates moral judgment development?

Several researchers have contrasted students with different college majors. It seems feasible that history and sociology majors, for instance, would have higher moral judgment scores than agriculture and chemistry majors. Yet the results from several studies are inconclusive (Bransford, 1973; Dispoto, 1974; Gallia, 1976; McGeorge, 1977; Schomberg, 1978 -- see Tables 2.2 and 2.3). Biggs, Schomberg and Brown (1977) found slight relationships in college freshmen between moral judgment and degree of familiarity with book titles, authors, painters, artists and people in the news.

As mentioned earlier, the first longitudinal study (Rest, 1975) found a significant relationship between moral judgment change and citing formal study or reading as an influence of change. However, these findings were not replicated in a subsequent study by McGeorge (1977) or Rest (1979). Therefore, previous research has produced little clarity on the question of what life experiences influence moral judgment development, or whether the influences are so idiocyncratic or subtle or interactive with so many other experiences that generalizations are impossible.

Table 2.1 Comparison of DIT Scores of Current Students and Adults with Comparable Educational Achievement

Current Students	P%	Adults with Comparable Educational Achievement	P%
Composite sample of junior high students, n = 1,322 (from Table 5.2)	21.9	Adults with only grade school or junior high education, n = 7 (Dortzbach 1975)	11.2
Composite sample of senior high students, n = 581 (from Table 5.2)	31.8	Composite of 44 adults with some high school and 24 adults with vocational school or high school completion (Dortzbach 1975), plus 17 young working adults (Rest 1975)	31.5
Composite sample of college students, n = 2,479 (from Table 5.2)	41.6	Composite of 64 adults with some college (Dortzbach 1975), 87 college-educated adults (Coder 1975), 60 women in continuing education program (Jacobs 1975), 124 Roman Catholic women (Moore 1975)	41.0
Composite of graduate students (mixed majors, not specifically medical or seminary): 82 Masters in education (Bloom 1976); 20 graduates at Oklahoma State U. (Ismail 1976); 10 graduates at U. of Toledo (Jacobs 1975); 20 graduates in Curriculum and Instruction, Oklahoma State U. (Deal 1978); 63 first-year law students plus 41 advanced law students (Willging 1979)	50.1	46 Adults with some graduate or professional education (Dortzbach 1975)	47.3
Graduate students in medical school: 94 students in first year in school in Midwest (Jacobs 1977); 283 in first year in Northeastern school, plus 205 third-year students (Husted 1978)	50.6	Practicing physicians: 157 doctors in Northeast (Sheehan 1979)	49.5
Seminarians in liberal Protestant seminary: 27 (Rest et al. 1974) and 29 (Schomberg and Nelson 1976)	57.8	Practicing clergy in liberal Protestant church: 4 (Ernsberger 1976)	62.5

Table 2.2

List of DIT Averages of College Groups

Average P% Index	n	S.D.	Sample Reference Number	Study and Sample Description
46.7	37	-	1	Alozie, 1976. Mostly education and psychology undergrads at U of Minnesota, 18 males. (Passed Consistency Check)
38.8	40	-	2	Anderson, 1975. Freshman in dental hygiene. (Short from DIT)
34.0	87	-	3	Biskin, 1975. Freshmen males from Virginia college. (Passed Consistency Check)
44.6	53	-	4	Bloomberg, 1974. Undergrads in psychology course in Connecticut college; mixed males and females (passed Consistency Check)
				Bransford, 1973. Undergraduate from small Lutheran Liberal Arts College in Minnesota (passed Consistency Check)
50.0	10	12.0	5	Music-art majors--freshmen
52.0	10	10.0	6	Music-art majors--seniors
54.0	12	7.0	7	Psychology-sociology majors--freshmen
58.0	23	10.0	8	Psychology-sociology majors--seniors
45.0	17	7.0	9	Natural sciences major--freshmen
53.0	17	11.0	10	Natural sciences major--seniors
57.0	12	12.0	11	Religion-philosophy seniors
53.0	14	9.0	12	Undecided majors, freshmen
41.0	90	12.8	13	Cauble, 1975: Undergrads, mostly sophomores and juniors ages 18-23, mixed SES from state university in southwest US.
50.4	140	5.3	14	Dispoto, 1974: undergrads at Rutgers U., about half males and females from mostly urban backgrounds, mixed SES, roughly equal freshmen, soph., jrs., and seniors (used 4 story DIT)
				Gallia, 1976. Undergraduates at N.J. state college
49.5	10	10.3	15	Humanities females, SAT average = 951, age 20-21
34.5	10	10.4	16	Science females, SAT average = 1050, age 20-21
38.3	98	14.3	17	Hartwick, 1975. Undergrads at Fairleigh Dickinson U., mostly female

Table 2.2 (Continued)

Average P% Index	n	S.D.	Sample Reference Number	Study and Sample Description
				Hurt, 1974. Mixed male and females, juniors and seniors in College of Education, U. of Minnesota (passed Consistency Check)
47.8	15	12.8	18	E group
51.1	19	11.5	19	AC group
52.2	20	10.8	20	C group
36.7	20	-	21	Ismail, 1976: Undergrads at Oklahoma State U.
39.5	49	-	22	Jacobs, 1976: College women undergraduates from U of Toledo. (Passed Consistency Check)
				Krause, 1976:
41.0	113	-	23	Freshmen and sophomores at midwest suburban college; age range 18-50 years; fairly evenly males and females
46.2	137	-	24	Sophomores, mostly females at 4 year private Roman Catholic college, urban setting in midwest, mostly females
46.9	152	16.4	25	Leming, 1976: junior and senior psyc. students at S.U.N.Y. in Stoneybrook
				Meyer, 1975: Coordinate campus of U of Minnesota in a small town in rural upstate Minnesota; all Lutherans from small towns, upper half of high school class, equal males and females (passed Consistency Check)
34.0	10	-	26	Freshmen
47.1	10	-	27	Seniors
				Private Lutheran College in Minnesota located in small town, most subjects from small towns, upper half of high school class, equal males and females (passed Consistency Check)
44.0	10	-	28	Freshmen
44.4	10	-	29	Seniors
				McGeorge, 1975: First year primary teachers' colleges in Christchurch, New Zealand; average age = 19+ years; 21 males and 125 females
45.6	22	10.4	30	Group A
44.0	23	11.4	31	Group B
43.5	29	13.2	32	Group C
44.3	25	12.5	33	Group D
40.9	47	10.6	34	Group E

Table 2.4 (Continued)

Average P% Index	n	S.D.	Sample Reference Number	Study and Sample Description
44.2	92	13.4	35	McGeorge, 1976: Follow up study of teachers after 3rd year of teacher training program (not a university degree) at Christchurch, New Zealand.
				Panowitsch, 1976: Males and females in 2 year general college in Minnesota, ages 17-46 (passed Consistency Check)
42.0	14	6.7	36	Ethics class (Winter)
42.2	9	5.1	37	Logic class (Winter)
42.1	34	7.1	38	Ethics class (Spring)
39.0	19	8.0	39	Logic class (Spring)
46.0	7	6.0	40	Religion class
41.7	9	6.7	41	Art class
40.6	25	8.8	42	Ethics class (Fall)
54.9	40	13.6	43	Rest, et al., 1974: junior and seniors in College of Education at U of Minnesota, about equal males and females (passed Consistency Check)
46.8	71	-	44	Rest & Bell, 1975: Undergraduates, both male and female, at U of Minnesota who volunteered for a YMCA Service project. (passed Consistency Check)
				Schomberg, 1976: Entering freshmen at U of Minnesota. (passed Consistency Check)
38.4	136	12.7	45	Agriculture College
39.9	66	12.2	46	College of Liberal Arts
35.7	60	13.4	47	General College (2 year junior college program)
41.2	93	13.4	48	Institute of Technology
50.0	34	-	49	Stevenson, 1975: Undergraduates of both sexes in College of LIberal Arts at U of Minnesota (passed Consistency Check)
				Troth, 1974: Undergraduate classes at St. Olaf, Mn., (private small liberal arts Lutheran College) (used 3 story DIT)
57.3	23	12.0	50	Special class on Values (avg. age = 20.3 yrs.)
52.9	24	12.0	51	Political science class (avg. age = 19.0 yrs.)
39.5	64	-	52	Weber, R., 1974: Undergrads in Elementary Education at U of Minnesota (passed Consistency Check)
24.5	161	8.8	53	White, 1973: College undergrads at U of Georgia

Table 2.3 (Continued)

Average PZ Index	n	S.D.	Sample Reference Number	Study and Sample Description
				Whiteley and Nelson, 1976: Entering freshmen at U of California--Irvine
36.6	35	12.7	54	Group S
38.9	27	16.5	55	Group L
[illegible]	15	15.5	56	Group C
[illegible]	30	15.7	57	Yussen, 1976: Undergrads in educational psychology class at U of Wisconsin at Madison, predominantly white and middle class. Herman-Nelson IQ average = 108.5. Equal males and females.
43.5	52	13.4	--	Broadhurst, 1977: Students in social work practicum (year long, sophomores)
50.6	52	12.0	--	Beginning of year Ending of year
				Course facilitators (juniors and seniors in social work)
46.8	11	12.2	--	Beginning of year
56.4	11	13.3	--	Ending of year

Table 2.4

List of DIT Averages of Student Groups in Graduate and Professional School

Average P% Index	n	S.D.	Sample Reference Number	Study and Sample Description
49.7	82	-	1	Bloom, 1976: Master degree candidates in education at William and Mary, Va.; from southern and eastern undergraduate schools.
48.6	20	7.5	2	Ismail, 1976: Graduate students at Oklahoma U., mixed males and females, mixed majors and specialties.
48.3	10	-	3	Jacobs, 1975. Graduate women at U of Toledo. (passed Consistency Check)
55.6	27	11.1	4	Rest, et al., 1974: Seminarians in liberal protestant seminary in Minneapolis; aver. age = 26.2 years.
65.2	15	9.5	5	Ph.D. students in moral philosophy and political science at U of Minnesota; average age = 23.6 years. (passed Consistency Check)
59.8	29	9.7	6	Schomberg & Nelson, 1976. Seminarians in liberal protestant seminary in Minneapolis.
53.5	48	-	-	Constantian & McAdams, 1977. Harvard grad students in various majors; median age = 23 years (3-story form).
43.2	20	-	-	Deal, 1978. Graduate students in Department of Curriculum and Instruction, Oklahoma State University.
50.2	283	13.0	-	Hustead, 1978. First year medical students in two northeastern U.S. universities.
50.8	205	13.4	-	3rd year medical students.
51.6	94	-	-	Jacobs, 1977. 1st year medical class at Medical College of Ohio at Toledo.
56.8	30	7.8	-	Lawrence, 1978. Ph.D. philosophy students (19 males, 11 females, mean age = 28.5). Passed consistency test.
22.5	16	6.1	-	Seminarians in radically fundamentalist seminary. All male, mean age = 27.4. (Passed consistency check).

Table 2.2 (Continued)

List of DIT Averages of Student Groups in Graduate and Professional School

Average P% Index	n	S.D.	Sample Reference Number	Study and Sample Description
54.3	147	13.0	-	Sheehan, 1979. American born and educated doctors in pediatric residency program.
32.8	97	13.2	-	Foreign born and educated doctors in pediatric residency program.
52.2	68	12.3	-	Doctors in internal medicine residency program.
55.5	23	-	-	Doctors in family medicine residency program.
56.8	18	-	-	Sprinthall & Bernier, 1977. Experienced teachers enrolled in special workshop in moral and cognitive development.
49.5	63	12.4	-	Willging, 1979. Law students before 1st year of instruction.
52.1	63	11.7	-	Same law students after 1st year.
52.2	41	14.5	-	Advanced law students in course in legal ethics.
46.4	142	12.7	-	Crisham, 1979: Staff nurses
62.4	10	12.2	-	Nurses with Masters Degree
45.2	36	12.4	-	Pre-nurses (in B. A. program)
54.8	37	14.7	-	Graduate students volunteering from School of Education (all females)
42.8	31	c.15	-	McIntyre, 1979: Students in evening business course

Table 24. Two-Year Changes in College and Noncollege Groups on the P Index

	College-bound			Noncollege		
Group	n	High School Testing	Two Years Later	n	High School Testing	Two Years Later
S	15	32.7	48.2	18	29.5	36.8
J	23	36.0	43.9	8	36.9	42.3
W	11	42.0	39.2	10	25.0	34.4
Average	49	36.3	44.2	36	29.9	37.4

From Rest, 1979.

2.5

Table [redacted] Summary of Intervention Studies

Study and Sample	Characteristics of Treatment	Change of Main Experimental Group	Comparison of Experimental Group Gains with Control Gains	Problems with study (see key, below)
Short-Term Studies				
1. Geis (1977) 90 college students	4 hour-long class periods over 2 weeks in group discussion of moral dilemmas	Nonsignificant	No difference	F, B, N
2. Walker (1974) 70 8th graders	Short, one-time exposure to different levels of moral reasoning	Nonsignificant	No difference	M, F, B, N
Social Studies Programs				
3. Rest, Ahlgren, Mackey (1972) 61 9th graders	12-week social studies unit to change attitudes towards police	Nonsignificant	No control group	R, A, M, F, N
4. Morrison, Toews, and Rest (1975) 103 9th graders	Half-year course in civics and social studies, involving discussion and projects	Nonsignificant	No difference	R, M, N
Psychological Development Programs				
5. Balfour (1974) 84 senior high students	Semester-long course with seminar and	3.3 point gain $t(53) = 2.01$, involvement in a community	No comparison reported	R, A, F, N
6. Erickson et al. (1975) 19 junior highs	Semester-long DPE Curriculum for personal development, in elective school class	6.84 point gain $t(18) = 2.27$, $p < .05$	No control group	R, A, C, F, N, S
7. French (1977) 117 senior highs	Quarter-long classes in English and History with values clarification	3.43 and .4 point gains t tests not available	No difference	R, I, N
8. Hurt (1975) 54 college students	Quarter-long training in DPE counselling and empathy skills	Nonsignificant	No comparison reported	R, A, F, N, S

9.	Allen and Kickbush (1976) 117 9th graders	8-month "Confluent Education" course with a semester unit on moral education	Non significant	No difference	R, M, F, N
10.	Sprinthall and Berrier (1977) 16 in-service teachers	6 weeks summer workshop in DPE plus one quarter of consultation	9.0 point gain $t(17) = 2.91$, $p < .01$	No control group	R, A, C, F, N, S
11.	Whiteley and Nelson (1976) 77 college freshmen	8-month experience in special residential college and course work in psychological growth	5.14 point gain $t(34) = 2.37$ $p < .024$	No comparison reported	A, F, N
	Moral Education Programs				
12.	Coder (1975) 87 adult church members	6 weeks, 2 hours per week, moral education program	10.0 and 11.0 point gains t test values not reported	Posttests significant difference $F = 5.69$, $p < .005$	R, C, F, N
13.	Fanowitsch (1975) 152 college students	Quarter-long applied ethics course (see section above)	4.9 point gain $t(72) = 3.21$, $p < .002$	Significant difference in post tests, $t = 2.56$, $p < .03$; no difference in pretests	R
14.	Fowko (1975) 68 college students	10 two-hour sessions in quarter-long course on moral values and commitments	8.1 point gain $F = 6.89$, $p < .05$	No comparison reported	R, A, C, F, N
15.	Siegal (1971) 262 high schools	Semester-long course on moral discussion	No test of pre/post significance	No difference	F, N
16.	Troth (1974) 42 college students	Semester elective course on moral values (to integrate personal values and behavior)	Nonsignificant	No comparison reported	R, A, F, N, S

Key: R = subjects not randomly assigned to treatments
A = inadequate statistical comparison of experimental gains with gains of control group
C = contamination of post testing by exposure to Kohlberg stage descriptions
M = subjects not motivated to take test or too young to understand it
F = no followup testing to determine if posttest gains are stable
B = treatment was too brief
N = treatment was conducted for first time or taught by inexperienced teacher
S = sample was too small (experimental group less than 30)
All tests of significance are two-tailed.

From Rest, 1979

III. REPORT ON CURRENT RESEARCH: LONGITUDINAL FOLLOW-UP ON THE IMPACT OF HIGHER EDUCATION ON MORAL JUDGMENT

The present study was undertaken to clarify the ambiguities left by previous research. It was intended to improve upon previous studies in several ways. The data of the previous longitudinal studies came from a testing in high school and a testing two years later: this is a very short time span; it tests college students in their sophomore or junior year (not a period notable for its stability), and the sample sizes were small (less than ten subjects in some comparisons). The present study uses a third testing, four years after the initial high school testing, and pools together several samples to increase sample sizes. Having three testings by which to compare college students with subjects who did not go on to college allows us to look for patterns of increasing divergence -- i.e., to see if college students are becoming increasingly different from non-college subjects. A pattern of increasing divergence related to the amount of time that the college group was in college would provide more convincing evidence of the impact of college education. In addition, the present study also carried out analyses on the DIT using the D score (see Davison and Robbins, 1978) as well as the usual P score. Previous research has shown the D score to be sensitive to shifts in lower stage reasoning as well as high stage reasoning, and is superior to the P-index in this regard. And lastly, the present study employed finer analyses of "life experience" data than previous studies.

Method

Subjects

Longitudinal subjects in samples J, S, and W (referred to in Section II, described in Rest, 1979 and in Rest, Davison & Robbins, 1978) were again

contacted and invited to participate by mail. Samples J and S had been first tested in 1972 in public schools in St. Paul, had average IQ scores and came from average SES backgrounds. Sample J was in junior high school then and Sample S was in senior high school. The three testings for Sample J used in the present study come from testings in 1974, 1976 and 1978. The three testings for sample S come from 1972, 1974 and 1976 (and Table 3.5 includes data from 1978 as a fourth testing). Of the original 72 subjects in Group J, 26 had completed all data over the three testings; of the original 105 subjects in Group S, 22 subjects had completed all data over the three testings. Although these drop out rates are high, comparisons of previous data between subjects who stay in versus those who drop out show no systematic differences in IQ, DIT scores, Comprehension, Law and Order Attitudes, or SES. Sample W had been first tested in 1974 in a high school in upstate Minnesota. The three testings used in the present study come from 1974, 1976 and 1978. Of the original 21 subjects, 11 had complete data over the three testings. Therefore, the total sample over the testings consists of 59 subjects. Of these, 38 subjects indicated they had gone to college and 18 indicated they had not (on three subjects this information was ambiguous).

Tests and Indices

Subjects who volunteered for a third testing were mailed the questionnaire, asked to complete it by themselves, and upon return were paid $10.00. The questionnaire included the DIT, the Comprehension of Moral Concepts Test, Law and Order Political Attitudes, and a "life history" section (see Appendix A). These instruments are described in Rest, et al., 1974 and Rest, 1979 along with reliability and validity information. (Brief descriptions are given in Section I.) The "life history" section is presented in Appendix A, page 33.

Both P and D indices were calculated for the DIT (see Revised Manual, 1979) and Comprehension and Law and Order scored in the usual ways (see Rest, 1979). Analysis of data in the "life history" section will be presented below.

Results And Discussion

The foremost question of this research is whether college students show greater gains in moral judgment than the gains of subjects not in college. Figure 3.1 shows the curves of these two groups on the P-index over the three testings. Recall that the first testing was while all subjects were high school seniors, the second testing was two years later, and the third testing was four years beyond high school. While both college and non-college groups show increases immediately after leaving high school, by the time that four years have passed, the college students are still showing gains while the non-college subjects are not. Table 3.1 shows the average P scores for the

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Insert Figure 3.1 and Table 3.1 here

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two groups over the three testings; compares the two groups at each testing by means of t-tests; and compares the two groups at testing 2 by ANACOVA by statistically controlling for their scores at testing 1, and likewise compares the two groups at testing 3 by controlling for scores at testing 1. Although the college group has higher mean scores at all three testings, it is not significantly different from the non-college group at testing 1, it approaches a significant difference at time 2, but by time 3, the two groups are highly significantly different. The ANACOVA analyses adjust for the initial differences in high school and show that the college group has had a higher rate of gain over 4 years than the non-college group. These results support the claim that higher education has an impact upon moral judgment development.

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Insert Figure 3.2 and Table 3.2 here

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Figure 3.2 and Table 3.2 present analyses using the D-index of the DIT instead of the P-index. Results are completely parallel to those of the P-index: namely, the two groups show an initial rise out of high school, but after 4 years have passed, the college group is significantly higher and has made sharper gains than the non-college group.

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Insert Figure 3.3 and Table 3.3 here

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Figure 3.3 and Table 3.3 show that the Law and Order test followed the same pattern as for the DIT. The Law and Order test is a measure of social-political attitudes. A high score indicates the advocacy of almost unlimited power to authorities at the expense of individual liberty, and the advocacy of societal stability even at undue cost to individuals. Other research has noted a decline in authoritarian attitudes over the course of a college education (e.g., Feldman & Newcomb, 1969), and we would suggest that this is due to development in moral judgment, not to blind indoctrination into the predilections of college professors (see Rest, 1979, Chapter 6 for discussion of the relation of moral judgment to political attitudes, and for a developmental reinterpretation of "authoritarianism").

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Insert Figure 3.4 and Table 3.4 about here

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Figures 3.4 and Table 3.4 present data on the Comprehension measure. On this measure the college group did not show a significant difference from the non-college group at any testing. The failure of the Comprehension measure to follow the pattern of the other measures is unclear, although its poor psychometric unreliability has been noted in previous research (internal consistency

of $\underline{r}$ = .56 and the test-retest reliability was $\underline{r}$ = .51 -- see Rest, 1979, Chapter 6). While both groups show a general drift upwards on Comprehension (which is significant) more fine-grained subanalyses may be hampered because of the test's low reliability.

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Insert Table 3.5 here

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Table 3.5 shows the only data now available on college and non-college groups over four testings --i.e., up to six years beyond high school. Although the sample sizes are too small to be more than suggestive, these data do suggest that the college group does maintain greater gains than the non-college group even two years beyond college graduation. Further, longitudinal study beyond the college years would be necessary for any confidence on this point, but the pattern is very reminiscent of the picture from cross-sectional studies given in Figure 1 in Section I.

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Insert Tables 3.6 and 3.7 and Figure 3.5 about here

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Table 3.6 disregards the college/non-college dichotomy entirely and compares subjects over the three testings on whether they lived at home or not. Subjects who were no longer living with their families showed greater gains than those still living at home, although the differential was not as dramatic as for the college/non-college factor. Evidently there's something to be said for simply getting out of the house. Table 3.7 and Figure 3.5 classify subjects both on residence and education, forming four sub-groups. Here we can see what interaction residence and education have. Figure 3.5 shows that college students who leave home are initially the most developed and maintain that advantage. However, college students who live at home show the same rate of gain as college student who leave home. For the subjects who

are not in college, living at home or not doesn't seem to make all that much difference (as far as moral judgment is concerned). We might have expected an additive effect from both the residence and education factors (i.e., college students away from home showing the greatest rate of gain, subjects not in college and living at home showing the least gain), but the results did not exactly pattern out this way. The results are largely attributable to pre-existing differences in high school and to the impact of college.

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Insert Table 3.8 about here

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Table 3.8 compares college students who went to large universities with students who went to small colleges. In the large university category, the University of Minnesota in Minneapolis was the most frequent institution, and also included the University of Wisconsin-Madison, and the University of Wyoming. Small colleges included Concordia College, Bethel, Macalester, Moorhead, St. Catherine, St. Cloud, University of Minnesota-Duluth, etc. As Table 3.8 shows, there were no appreciable differences in high school between students who went to either type of institution, and the gains were similar in each institution.

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Insert Table 3.9 about here

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At the end of the questionnaire, subjects were asked to write in a four line space a description of those experiences that they thought had influenced their moral thinking (see last question, Page 33, Appendix A). Within those four lines, subjects wrote various things and their responses were scored into 18 categories given in Table 3.9. (This scoring scheme was devised by Greg Rest.) The categories are very close to the wording used by the subjects themselves, and while the boundaries between categories may not be very sharp,

any response that fell between categories was simply scored in both. Subjects could list as many influences as they wished, and typically a subjects was scored as citing more than one influence. This information was analyzed simply in terms of whether a particular category was cited by the subject or not. If so, those subjects formed the "yes" groups in Table 3.9; and the "yes" group was compared to all the rest of the subjects who had not cited that particular influence.

Note that this "life experience" information is the subject's own theory about what retrospectively had an effect on his thinking. These data have unknown correspondence with a subject's actual experiences. For instance, only three subjects cited travel (Category #17), and we do not know if only these three subject did any substantial travel, whether others did but didn't get anything out of it (regarding moral thinking), or whether they were really influenced by travel but didnot think to mention it. The disadvantage of this kind of data is that it is not objective and depends upon the subject's theory about what influences his thinking (which some research suggests can be very erroneous -- see Nisbett and Wilson, 1977). On the other hand, subjective data like this may be more valuable because it can indicate subjective impact rather than just record an outward event. That is, even if a lot of subjects did travel, we are only interested in those for whom the experience was provocative and stimulating. Many people may be exposed to some experience but only some of them may be especially stimulated to reformulate their thinking from it. If a particular experience is stimulating in this way, and causes a lot of reflection, isn'tthis what we want to know, not just outward exposure? Therefore, it might be that a subject's report of what influenced him is more valuable information.

Of the 59 subjects on whom we had this information, no single category was mentioned by a majority of subjects. Category #6, "New social contacts, an

expanding social world" was not frequently cited (by 28 subjects). Only one subject mentioned that change was due to "a particular time of personal stress" (Category 15), which is a little surprising in that almost all cognitive developmental theories of change (e.g., Turiel, 1969) have stressed "disequilibrium" and "cognitive conflict" as the essentail conditions for development. Six subjects were of the opinion that their moral thinking had not changed (Category #18), but it turned out that their moral judgment scores went up as much as all the subjects who thought they had changed. Category #2, "Formal instruction or study" was of special interest for its link to education. If education is associated with greater gains, then it might seem that the gainers should cite "formal education" -- but those citing it showed no more gains than those not citing it. Category #4, "Spending more time contemplating issues," was one of the few categories in which subjects citing it showed a greater rate of increase than subjects not citing it. The emphasis here on reflection and reworking one's thought is consistent with developmental theory. Perhaps reflection rather than reading or taking courses is more crucial. Category #5 seems to be a reason that the less imaginative subjects preferred -- those not citing it did much better. Similarly Category #6, "expanding social world" seems to be negatively associated with gains. Category #11, "living away from home," was cited by subjects who were relatively more advanced in high school and who retained a comparable advantage, although did not increase at a faster rate. Category #13, "direct involvement," was only cited by three subjects (and differs from Category #3 in that #13 is active participation whereas #3 is passive reading about); but the pattern of gain for those citing it showed a higher rate of increase. Similarly "travel," #17 was endorsed only by a few subjects, but those who cited it had a rapid rate of gain.

These findings on "life experiences" must be regarded as preliminary since the data on which they are based did not involve any extensive probing, the

information has unknown validity, and in many cases the sample groups are very small. More systematic and extensive work is underway by Volcher (1979).

In summary, this study supports the notion that higher education fosters development in moral judgment, particularly at the four year mark rather than in the first two years. In addition to this project, quite a few other longitudinal studies of moral judgment are currently underway using the DIT (see Appendix B for list of institutions and contacts), and we should soon have a fairly large data base on moral judgment development in institutions of higher education.

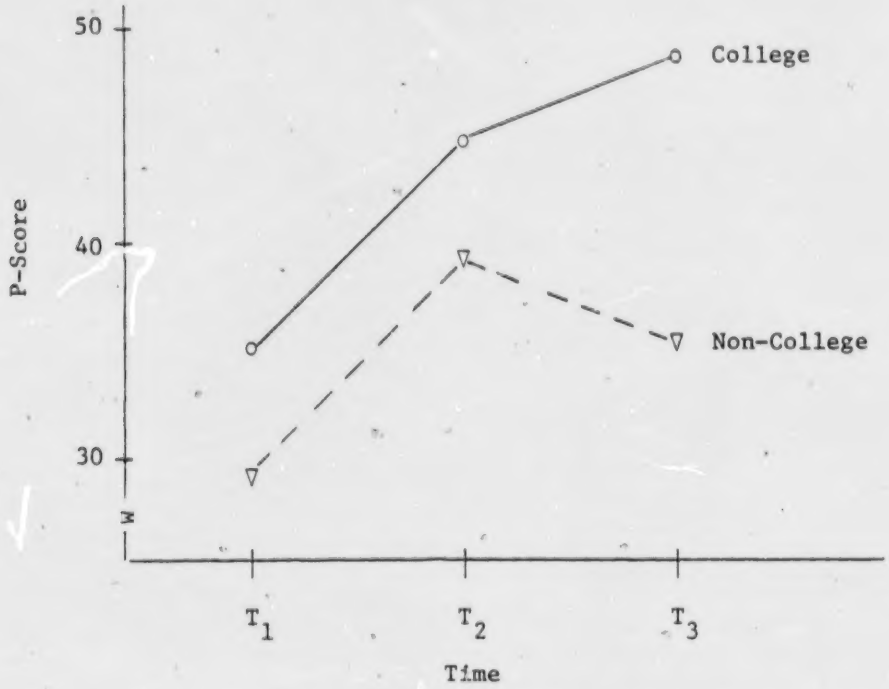

Figure 3.1. Comparison on P-Score of College and Non-College Groups

Table 3.1

Comparison on P Score of College and Non-College Groups

	Means T_1	Means T_2	Means T_3
College (n = 38)	34.8	44.4	48.5
Non-College (n = 18)	29.3	38.9	35.1
t-tests	t = 1.43	t = 1.67	t = 3.37
Coll. v. Non-Coll.	p = .16	p = .10	p = .002
ANACOVA	———	F = .90	F = 9.2
Coll. v. Non-Coll.	———	p = .35	p = .004
(partialling out T_1 scores)			

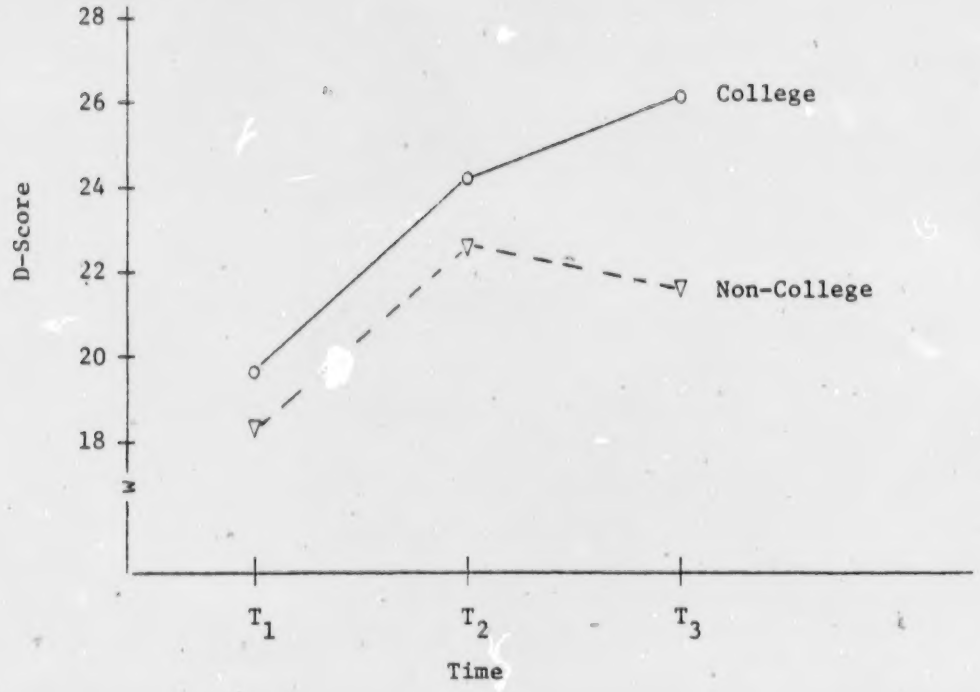

Figure 3.2. Comparison on D-Score of College and Non-College Groups

Table 3.2

Comparison on D Score of College and Non-College Groups

	Means T_1	Means T_2	Means T_3
College (n = 38)	19.8	24.3	26.3
Non-College (n = 18)	18.6	22.9	21.8
t-tests	t = .83	t = .76	t = 2.35
Coll. v. Non-Coll.	p = .41	p = .45	p = .02
ANACOVA	———	F = .26	F = 9.95
Coll. v. Non-Coll.	———	p = .62	p = .001
(partialling out T_1 scores)			

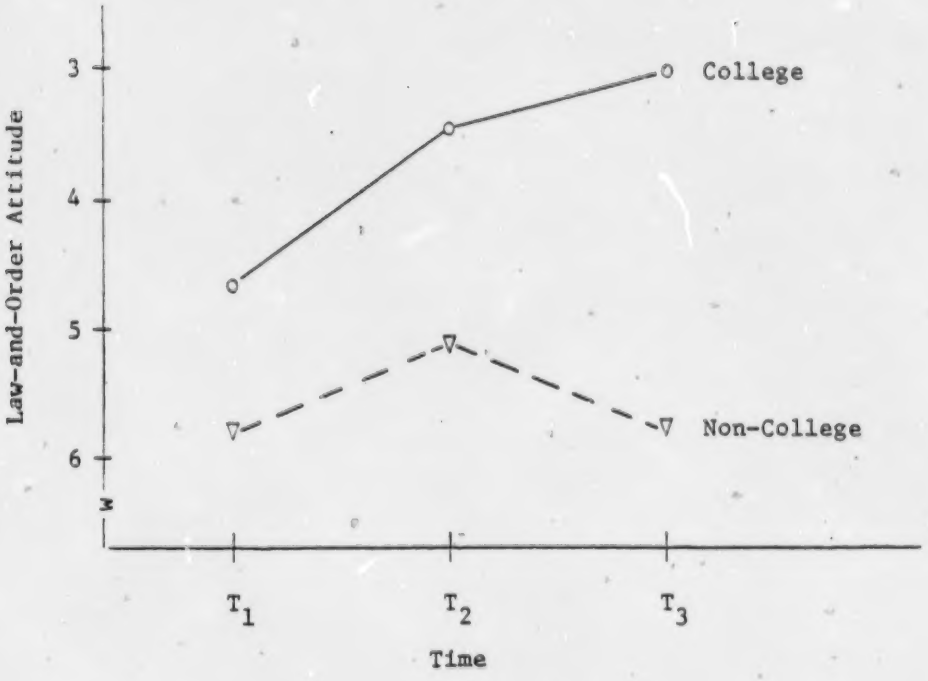

Figure 3.3. Comparison on Law-and-Order Attitudes of College and Non-College Groups

Table 3.3

Comparison on Law-and-Order Attitudes of College and Non-College Groups

	Means T_1	Means T_2	Means T_3
College (n = 32)	4.63	3.41	3.06
Non-College (n = 13)	5.85	5.15	5.69
t-tests	t = 1.29	t = 1.97	t = 3.32
Coll. v. Non-Coll.	p = .21	p = .07	p = .004
ANACOVA	———	F = 3.84	F = 12.15
Coll. v. Non-Coll.	———	p = .057	p = .001
(partialling out T_1 scores)			

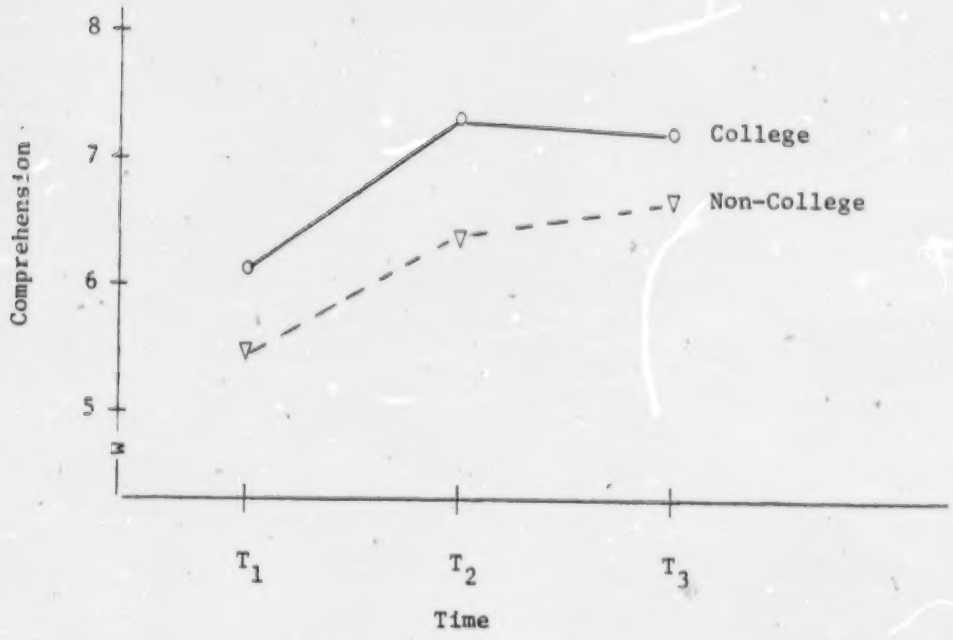

Figure 3.4. Comparison on Comprehension of College and Non-College Groups

Table 3.4

Comparison on Comprehension of College and Non-College Groups

	Means T_1	Means T_2	Means T_3
College (n = 32)	6.2	7.3	7.3
Non-College (n = 13)	5.5	6.4	6.8
t-texts	t = .71	t = 1.79	t = .44
Coll. v. Non-Coll.	p = .49	p = .08	p = .66
ANACOVA	———	F = 2.08	F = .01
Coll. V. Non-Coll.	———	p = .16	p = .92
(partialling out T_1 scores)			

Table 3.5

Comparison on P Score of College and Non-College Groups Over Four Testings

	1972	1974	1976	1978
College (n = 9)	28.5	51.7	49.0	52.2
Non-College (n = 6)	32.0	38.8	31.7	35.8

Table 3.6

Comparison on P Score of Subjects Living at Home Versus Those Not Living at Home

	Time 1	Time 2	Time 2
Living at Home (n = 24)	31.9	38.5	39.8
Not Living at Home (n = 34)	34.3	45.4	48.5

Table 3.7

Comparison on P Score of Subjects Divided Into Place of Residence and Education

Group	Time 1	Time 2	Time 3
In College, Living at Home (n = 14)	31.3	39.5	45.6
In College, Not at Home (n = 24)	37.0	46.2	49.7
Not in College, at Home (n = 10)	30.7	38.8	34.4
Not in College, Not at Home (n = 8)	27.5	39.0	36.1

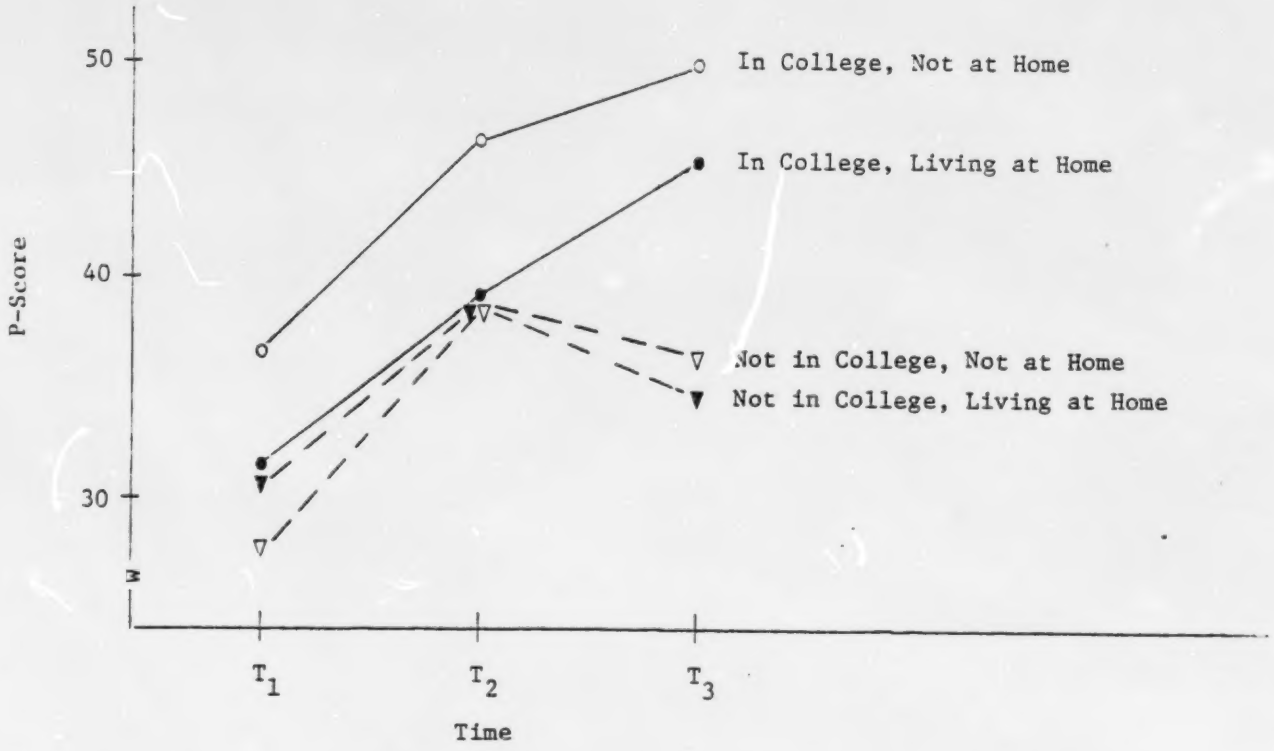

Figure 3.5. Comparison on P Score of Subjects Divided into Place of Residence and Education

Table 3.8

Comparison on P Score of Students in Different Colleges

Type of College	Time 1	Time 2	Time 3
Large university (n = 17)	34.4	44.7	47.1
Small university (n = 21)	35.7	43.6	49.3

Table 3.9

Comparison on P Scores of Subjects Who Attribute Change to Various Life Experiences

Type of Life Experience	Number of Subjects Citing This Influence		Time 1	Time 2	Time 3
1. Reading	13	"YES" Group	29.2	38.9	41.3
		"NO" Group	34.4	43.5	47.3
2. Formal instruction or study	16	YES	29.1	41.4	44.5
		NO	34.9	42.8	46.5
3. Current issues and events	19	YES	35.1	42.9	46.5
		NO	32.4	42.3	45.7
4. Spending more time contemplating issues	8	YES	34.6	48.8	53.6
		NO	33.1	41.5	44.8
5. Maturation, "getting older," sense of "growing up"	5	YES	24.3	34.0	29.0
		NO	34.1	43.2	47.6
6. New social contacts, an expanding social world	28	YES	31.9	41.7	39.4
		NO	28.8	43.1	51.9
7. Specific influential people	3	YES	37.8	42.2	41.7
		NO	33.0	42.5	46.2
8. New "real world" responsibilities -- marriage, job, managing money, children	22	YES	38.3	38.5	45.5
		NO	30.3	44.8	46.3
9. "Making decisions on my own"	11	YES	42.1	45.8	45.5
		NO	31.3	41.7	46.1
10. Making decisions for the future	3	YES	35.0	34.5	40.0
		NO	33.2	42.9	46.3
11. Living away from home	11	YES	42.0	50.0	52.1
		NO	31.3	40.7	44.6
12. Religious experiences and/or instruction	4	YES	16.7	35.0	40.0
		NO	34.5	43.0	46.4
13. Direct involvment in community/world political affairs	3	YES	31.1	44.5	55.0
		NO	33.3	42.4	45.5
14. Experiencing or witessing personal tragedy	5	YES	35.3	45.7	39.0
		NO	33.1	42.2	46.6
15. Particular time of personal stress as a turning point	1	YES	23.3	35.0	46.7
		NO	33.5	42.6	46.0
16. "Change in lifestyle"	2	YES	38.3	39.2	47.5
		NO	33.1	42.6	45.9
17. Travel	3	YES	31.1	53.9	58.9
		NO	33.4	41.9	45.3
18. No change in thinking	6	No change	31.7	41.4	45.7
		Others	33.5	42.6	46.0

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Lind, Herr Georg
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(extensive studies of moral judgment development in a number of European universities)

Lippitt, Dr. Mary E. and
McIntyre, Vicki
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(preliminary study of group decision making on ethical issues among business students)

Mentkowski, Dr. Marcia
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(large scale longitudinal study of several developmental variables of college students)

McGeorge, Dr. Collin
Education Department
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(longitudinal study of students in teachers' college; life experience and moral judgment)

Regan, Rev. Columkille
Center for Human Development
University of Notre Dame
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(large scale longitudinal study of Roman Catholic priests)

Sheehan, Dr. Joseph T.
Professor and Head
Research in Health Education
School of Medicine
University of Connecticut
Farmington, Connecticut 06032

(extensive studies of students at several medical schools as well as practicing M.D.s; relates DIT to clinical performance)

Smith, Dr. Alexander F.
Associate Dean of Students
Wittenberg University
Springfield, Ohio 45501

(The moral judgment of college students in disciplinary trouble)

Volcher, Mr. Joel
Augsburg College
731 - 21st Avenue South
Minneapolis, Minnesota 55454

(studies of students' perceptions of what life experiences influence their moral judgment)

Vice President for Student Affairs
101 Jessup Hall
Student Services
University of Iowa
Iowa City, Iowa 52242

(large scale longitudinal and cross-sectional studies of Iowa students on several developmental measures)

Whiteley, Dr. John M.
Department of Social Ecology
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(longitudinal studies using several developmental measures of effects of specially designed curricual -- residence hall intervention)

Whitla, Dr. Dean K.
Director, Office of Instructional Research and Evaluation
11 University Hall
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(freshman-senior contrasts on several developmental measures of undergraduates at Harvard, Brown, University of Georgia, Boston State, University of Nebraska at Lincoln, and University of California at Irvine)

Wilkins, Dr. R. A.
Teacher Education
Western Australian Institute of Technology
Hayman Road, South Bently
Western Australia 6102

(DIT scores of education students in different subject areas)

Willging, Dr. Thomas
College of Law
2801 West Bancroft Street
Toledo, Ohio 43606

(longitudinal studies of the development of moral judgment in law students, especially of students taking ethics course)

PERSONAL BACKGROUND

1. What is your age? _____

2. Currently, what is your main occupation?
(High school sophmore, juinor, or senior; working; college; vocational school; military service; housewife; or other)

_____

If in school, what is the name of the school? _____

_____

3. Are you currently living at home with your family? _____

4. Are you married? _____ Any children? (Ages) _____

5. What do you expect your future occupation(s) will be? _____

_____

6. Do you think your opinions on this questionnaire have changed in two years?
(Check one)

_____ not really changed _____ changed somewhat ____ anged a lot

7. What experiences in the last two years have most affected your thinking about social problems?
(Reading, making important decisions, new responsibilities, events in the world and nation, new friends, personal tragedy, etc.)
(Please describe)

_____

_____

_____

_____

Appendix B

Contacts for Ongoing Studies of Higher Education

Using the Defining Issues Test

The following list of people are engaged in ongoing studies of the development of moral judgment using the DIT (as best I know). The institutions of higher education with which they are affiliated is indicated as well as a brief descritpion of their direction and special interest. Additional single studies of college students and students in professional schools are on the lists of 42 samples in Tables 2.2 and 2.3. References to these studies are given in the back of the 1979 book.

Beddoe, Dr. I. B.
School of Education
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(moral judgment of teachers in school of education in Trinidad)

Dr. Robert B. Bloom
Division of Special Education
College of William and Mary
Williamsburg, Va. 23185

(moral judgment of education students)

Bridges, Dr. Claude F.
Office of the Director of
Institutional Research
Department of the Army
United States Military Academy
West Point, New York 10996

(study of West Point cadets)

Broadhurst, Dr. Betty P.
Social Work
Colorado State University
Fort Collins, Colorado 80523

(effects of social work practicum on undergraduate students on DIT)

Clouse, Dr. Bonnidell
Division of Educational Psychology
Indiana State University
Terre Haute, Indiana 47809

(relation of DIT to religious and political attitudes in college students)

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(comparative studies of moral judgment on DIT and on specifically nursing dilemmas; compares different nursing groups)

Davison, Dr. Mark
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(cross-sectional and longitudinal study of college and non-college subjects on several developmental variables)

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(moral judgment in college students)

King, Dr. Patricia
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Columbus, Ohio 43210

(comparisons of moral judgment with reflective judgement)